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Award Term Incentive Contracting: An Investigation of United States Air Force Strategic Purchasing

Rachael A. Harris

AWARD TERM INCENTIVE CONTRACTING:

AN INVESTIGATION OF UNITED STATES

AIR FORCE STRATEGIC PURCHASING

THESIS

RACHAEL A. HARRIS, GS-12

AFIT/GAQ/ENV/01M-07

DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY
AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio

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Rachael A. Harris, B.A.

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Rachael A. Harris, B.A.
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Approved:

David Petrillo, Lt Col, USAF (Chairman)	01 MAR 01 Date
William K. Stockman, Lt Col, USAF (Member)	01 MAR 01 Date
Paul W. Thurston, Maj, USAF (Member)	01 May 01 Date

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Rachael A. Harris

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Abstract

This research explored implementing a best commercial practice of establishing strategic purchasing relationships within the Department of Defense (DOD) procurement environment. The research was sparked by Air Force Material Command's (AFMC) instituting a commercial style acquisition strategy using an award term incentive on several programs. The award term incentive provides for extensions or reductions to the term of the contract based on contractors' level of performance. Forthcoming implementation of Air Force FAR supplement 5317.7X, Incentive Term Extension, will likely increase the number of acquisitions using an award term incentive.

Research findings indicate that management should consider expanding the AFMC award term guidance to include the model developed from this research, which identifies decision criteria for selecting the award term incentive strategic purchasing method. Findings indicate that the acquisition professionals may not have the expertise or related purchasing skills necessary to establish strategic purchasing relationships for commercial type performance based services and that training is needed. The researcher also uncovered evidence that instability and reductions in the DOD workforce affects acquisition professionals' ability to maintain currency with the changing legal environment. Further, workforce instability and reductions may influence the implementation of strategic contractual relationships. The research concludes that implementing the award term incentive affects the DOD competitive market.

AWARD TERM INCENTIVE CONTRACTING: AN INVESTIGATION OF UNITED STATES AIR FORCE STRATEGIC PURCHASING

I. Introduction

As a foundation for strategic purchasing, this chapter describes budget constraints, workforce reductions, and acquisition reform initiatives. The new award term incentive contracting strategy is introduced as well as the traditional method of establishing long-term purchasing relationships. A commercial supplier relationship model and a conceptual award term incentive model are presented. The research problem, objectives, questions, and methodology are identified. Finally, the scope and the limitations of the research are defined.

The Acquisition Environment

Budget Environment. Between 1974 and 1997, the federal government continually spent more money than it collected. By 1997, the federal deficit was $288 billion, and the total cumulative debt had reached an estimated $5.4 trillion. (OMB, 1999:7) Politicians calling for a balanced budget saw decisive election victories in 1994. The fall of the Berlin Wall in 1989, the collapse of the Soviet Union, and the end of the Cold War fueled the quest for Department of Defense (DOD) budget reductions as Congress searched for the elusive peace dividend.

The newly elected Congress targeted defense, the largest category of discretionary spending in the federal budget, in its advancement toward a balanced budget. Congress

enacted the Budget Enforcement Act (BEA). This act was designed to limit discretionary spending while ensuring that any new entitlement programs or tax cuts did not make the deficit worse. The factors below resulted in more tax revenue available to reduce the deficit.

- The BEA set annual limits on total discretionary spending for defense, international affairs, and domestic programs.
- The BEA created "pay-as-you-go" rules for entitlements and taxes: those who proposed new spending on entitlements or lower taxes were forced to offset the costs by cutting other entitlements or raising other taxes (OMB, 1999:10).

The DOD has been coping with declining budgets, both in nominal and real terms for more than a decade. Defense procurement spending dropped an inflation-adjusted 67% between 1987 and 1995 (Pare, 1994:96).

Workforce Reductions. Due to the resulting budget constraints between 1993 and 2000, the defense workforce was significantly reduced. The military force structure was reduced by 29.9% from 936,731 to 656,883. DOD civilian force structure has decline by 29.4% from 966,087 to 682,286. During the same time, the overall Executive Branch workforce only declined by 18.2% from 2,188,647 to1, 789,514 (OPM: 2000).

Acquisition Reform Initiatives. DOD acquisition has been the subject of numerous commissions calling for reform to simplify the process, cut cost, and maintain or improve mission capability. As listed in a Templin and Heberling article, the commissions have recommended the following:

1. emulation of private sector buying practices (1983 Grace Commission);
2. decreased use of military specifications (Mil specs) and increased use of commercial products (1983 Grace Commission and 1986 Packard Commission); and

3. use of commercial style competition rather than price-based competition (1970 Fitzhugh Commission and 1986 Packard Commission). (Templin and Heberling, 1994:42-43)

Templin and Heberling report a J. Ronald Fox conclusion from a review of 12 major studies that attempts to improve the acquisition process have largely been ineffective until the last decade (Templin and Heberling, 1994). Today, ideas abound regarding what to change in the acquisition process and how to do it.

The Federal Acquisition Streamlining Act (FASA) of 1994 and the Federal Acquisition Reform Act (FARA) of 1996 are enabling the DOD to find ways to reduce costs. FARA mandates compliance with 41 U.S.C. 404, which states that government-wide procurement policies, regulations, and procedures promote economy, efficiency, and effectiveness in the procurement of property and services by the executive branch of the federal government.

The 1970 Fitzhugh Commission and the 1986 Packard Commission call for the use of best commercial practices (Templin and Heberling, 1994:43). Best commercial practices are those practices that have proven to be successful by the commercial sector as evidenced by quantifiable cost reductions or gains in competitive advantage that can be replicated. DOD's implementation of commercial purchasing practices in response to acquisition reform initiatives was limited until the mid 1990's. A Templin and Heberling article, which compares the results of three master's thesis research efforts for the Air Force Institute of Technology (AFIT), suggests that using commercial practices and removing regulatory obstacles enhances the potential for reducing cost (49). Therefore, if

DOD implements the use of commercial practices, the government may finally achieve real savings in DOD acquisition programs.

Long-term Purchasing Methods

Traditional Purchasing. Priced options have been the DOD's traditional purchasing strategy used to establish longer-term contractual relationships. The elements of a traditional purchasing relationship identified by Stuart are:

1. primary emphasis on price;
2. shorter-term contracts;
3. evaluation by bid or arms length negotiations;
4. many suppliers;
5. improvement benefits are shared based on relative power; improvement at discrete time intervals;
6. problems are suppliers responsibility to correct;
7. information is proprietary; and
8. a clear delineation of business responsibility (Stuart, 1993:23)

The priced option strategy is normally implemented through arm's length competitive negotiations. The basic contract is usually one year with several option years. The options are unilaterally exercised by the government based on the requirements of the Federal Acquisition Regulation (FAR). The FAR states that the contracting officer may exercise options only after determining that –

1. funds are available;
2. the requirement covered by the option fulfills an existing government need;
3. the exercise of the option is the most advantageous method of fulfilling the government's need, price and other factors considered; and
4. the option was synopsized in accordance with FAR Part 5 unless exempted by 5.202(a)(11) or other appropriate exemptions in 5.202 (FAR, 2000:17.207(c)).

The traditional strategy ignores the impact of the type of item or service being purchased on the type of relationship needed to execute the program effectively and efficiently.

Further, the traditional method does not link contractor performance to continuing the business relationship.

New Purchasing Strategy. Due to budgetary reductions, force structure reductions, and reform initiatives, it is critical to select the appropriate purchasing strategy in acquiring and managing mission capability. One commercial purchasing strategy is to reward contractor performance with continuing business. The Air Force Material Command (AFMC) recently instituted a similar strategic purchasing method on several programs. This strategic purchasing method is an award term incentive that provides for extensions or reductions to the term of the contract based on the contractor's level of performance.

Background. The commercial sector has been consolidating and downsizing for over a decade. U.S. defense contractors have merged with each other in an effort to remain competitive (Gregory, 1997). The reorganized companies realized they did not have the economies of scale to achieve efficiencies for some functions. Continuing competitive pressure led some companies to contract out services that were previously performed in-house (Wilcox, 1995:53). DOD's industrial base has experienced these same competitive pressures. Although the DOD is responding to the budget constraints and workforce reductions, DOD acquisitions have not generally occurred in a perfectly competitive market.

Contracting for services is not new; however, the emphasis is growing larger than just contracting for individual services. Entire departments or functions are sometimes eliminated and their activities acquired from a supplier. The type of supplier relationship needed for outsourced functions depends on how close the activity is to the organization's

core competence. "A core competence refers to a skill, process, or resource that distinguishes a company and makes it unique compared to other firms" (Monczka et. al., 1998:213). Outsourcing strategies have become central to an organization's overall purchasing strategy. One definition of outsourcing used in the DOD is "the transfer of a function previously performed in-house to an outside provider" (DOD, 1996:1).

Sourcing Management. During the beginning of this century, the Air Force will continue to experience diminishing budgets and shrinking manpower. The traditional approach of owning a capability or managing a large number of suppliers of a capability through arm's length relationships is changing to a strategic source management approach. "Sourcing management involves integrating supplier capabilities into organizational processes to achieve a competitive advantage through cost reduction, technology development, quality improvement, cycle time reduction, and delivery capabilities to meet customers' requirements" (Monczka et. al., 1998:4). Therefore, it is important to explore the commercial practice of sourcing management to reduce mission capability cost and to reduce the cost of contract relationship management.

Government Barriers to Strategic Purchasing. Government source selection practices were found as a barrier in five consolidated studies by Templin and Heberling and include the following components: award based on price; insufficient proposal time; set-asides; delay in awards; award to poor performer (inability to reward good performers); and the solicitation format. Over 90% of the firms found DOD contracts difficult to understand. This is the top barrier. Tied at 81.8%, the second highest barriers are price based awards (without past performance) and inability to reward

good suppliers with repeat business (Templin and Heberling, 1994:49). These are serious barriers to sourcing manag ement within the DOD.

Performance-based Strategy. Leading up to the 21st century, acquisition reform efforts included rewrites to major portions of the FAR and many of its supplements. The new DOD policy is to maximize performance, innovation, and competition. Performance-based strategies for the acquisition of services should be implemented wherever possible.

> As services become an increasingly significant component of what the Department buys, we must ensure that we acquire them effectively and efficiently. That is why the use of performance-based acquisition strategies for services remains among my highest priorities (Gansler, 2000:1).

Prior to the issuance of the new policy, AFMC applied acquisition reform by awarding several new contracts using a performance-based acquisition strategy to include an award term incentive provision. This provision allows extensions or reductions to the length of the contract period based on the performance of the contractor. According to a briefing prepared by Major Vincent Feck, AFMC, the award term incentive is a:

> derivative concept of award fee contracts where the contractor, instead of earning fee for performance as in award fee contracts, earns additional periods of performance without having to compete for the award. Award term provisions provide a method of fostering long-term relationships and rewarding good performance (Feck, 1999:3).

Award term incentive contracting is the Air Force's attempt at achieving a long-term strategic purchasing relationship.

Models

A commercial sector supplier partnership model and a conceptual award term incentive model are described and presented.

Commercial Supplier Partnership Model. The supplier partnership arrangement establishes an ongoing relationship between strategic alliances. The mutually dependent relationship requires contract vehicles with longer planning horizons and performance periods. A strategic purchasing partner is defined here as, "an agreement between a buyer and a supplier that involves a commitment over an extended period, and includes the sharing of information along with the sharing of risks and rewards of the relationship" (Ellram, 1995:10). Figure 1 is a representation of a commercial supplier partnership model.

Conceptual Award Term Incentive Model. In looking for ways to manage programs efficiently and effectively, the government is looking to industry's example of outsourcing. The award term incentive is the Air Force's purchasing method to emulate the best commercial practice of establishing strategic supplier partnerships. Application of award term incentive contracting is evolving to reduce risk and increase benefits to the Air Force. Figure 2 presents a conceptual representation of AFMC's strategic purchasing award term incentive model. This model depicts impacts from the DOD acquisition environment including the type of function being procured, the legal and regulatory environment, the competitive environment, and the capability needs of the reduced workforce. This research effort is limited to pre-contract award factors of this model.

Research Problem

Forthcoming implementation of Air Force FAR supplement (AFFARS) 5317.7X, Incentive Term Extension, may increase the number of acquisitions using an award term incentive provision as a method of strategic source management (AFFARS, 2000). Prior

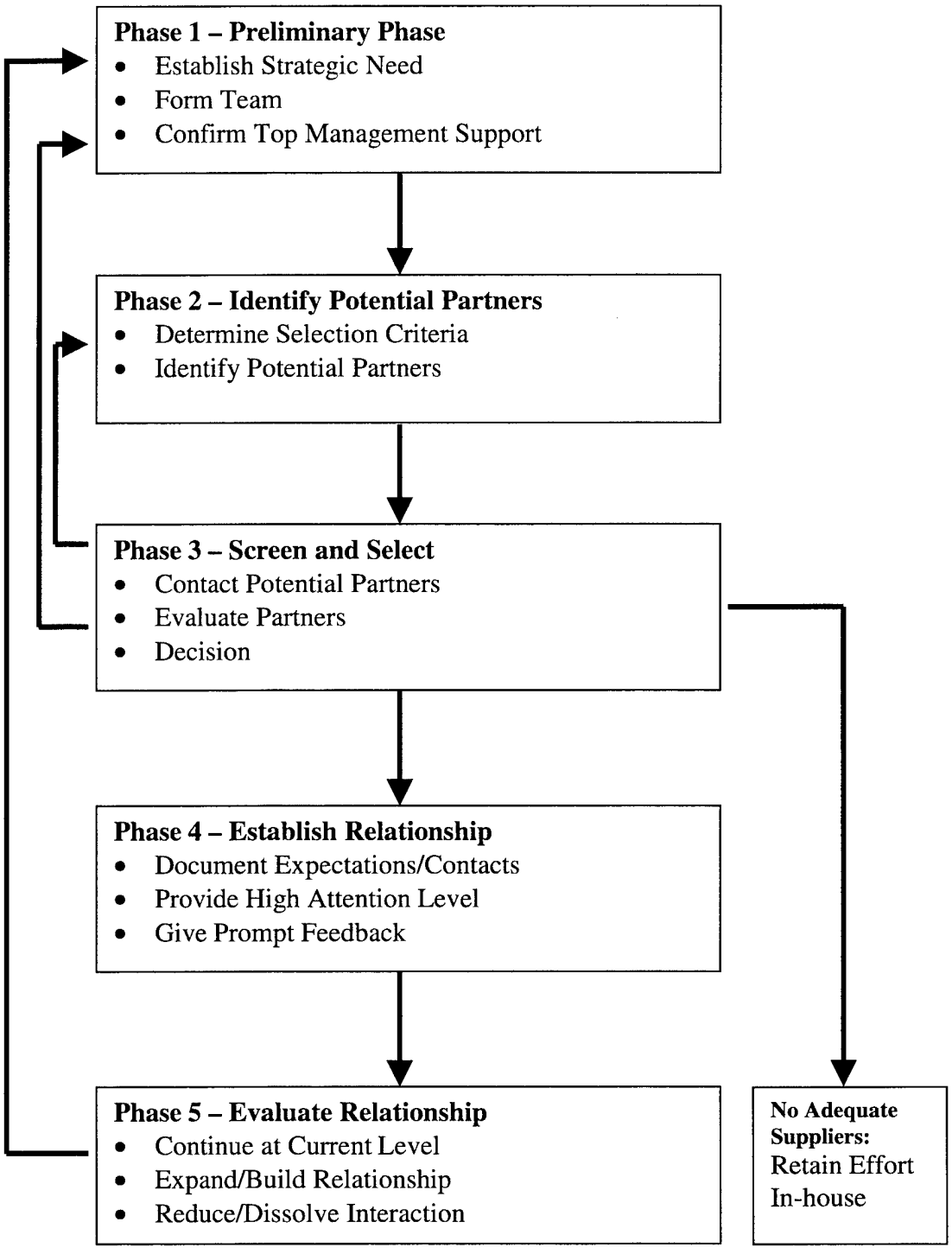

Figure 1: Commercial Supplier Relationship Model (Ellram, 1991: 27)

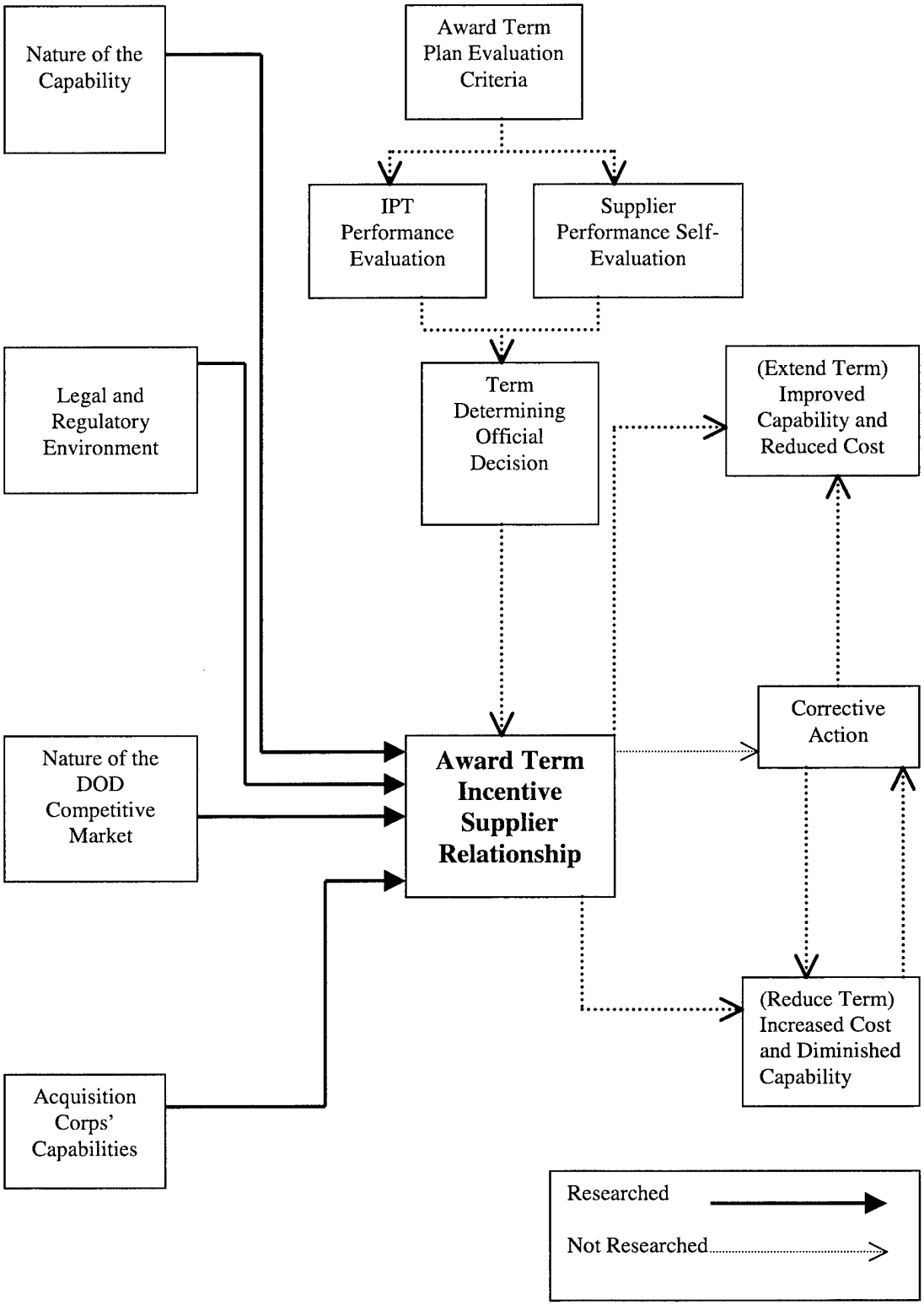

Figure 2: Conceptual Award Term Incentive Model

research has resulted in a model depicting the factors that influence supplier partnerships for the commercial sector. However, there is no FAR coverage or DOD guidance for establishing the award term incentive and the commercial model does not address DOD unique factors.

Purpose and Objective of Research. The purpose of this research is to identify and examine the nature of the factors for establishing and implementing the award term incentive strategy in DOD suppler relationships. Further, the objective of this research is to develop an award term incentive model that will assist DOD acquisition professionals in formulating strategic purchasing relationships.

Research Questions. To guide development of an award term incentive model the following research questions were developed. Each is described below:

1. What is different about the functional capability of what we are buying that requires the establishment of strategic contractual relationships using the award term incentive?

This question identifies how the capability being acquired determines the degree of the purchasing relationship for the award term model. Near critical items can introduce an internal competitive element for the procurement of the capability.

2. How are long-term strategic supplier relationships established using the award term incentive in the public procurement environment?

The information gained from this question identifies the controlling the legal and regulatory factors when implementing the award term incentive concept.

3. What is the nature of the DOD competitive market when using the award term incentive?

This question identifies and defines the nature of the DOD market when using the award term incentive.

4. What capabilities do the downsized acquisition corps needed in order to plan and implement the strategic supplier relationship using the award term incentive?

This information identifies areas of training and levels of knowledge or skill need by acquisition personnel to implement the award term incentive method in DOD acquisitions.

Methodology

This research is a qualitative case study and comparative analysis. The conceptual award term incentive model was developed from the commercial literature on strategic purchasing relationships and expanded to describe the use of award term incentive tool. The case study was used to identify the factors and describe the complex environment that influences establishing and maintaining strategic purchasing relationships in the DOD acquisition environment. A comparative analysis was conducted to examine the strength of the explanation provided by the new model.

The case study consists of an examination of contractual documents and interviews with members of five AFMC integrated product teams (IPTs) currently using the award term incentive tool. A review of Air Force records identified seven contracts that had implemented this strategic purchasing method. One case used a different tool than the award term incentive. This case was excluded from this research effort. In a second case, the acquisition strategy had been revised to eliminate the award term incentive and was excluded for this research effort. The data was analyzed to find themes and patterns to describe the new model. The theoretical content of the model was established through literature review. A comparative analysis was conducted to determine the validity of the final award term incentive model.

Scope and Limitations. Within the Air Force, only AFMC is currently developing internal supplemental regulations for award and administration of award term incentive contracts. Further, Maj Vincent Feck of AFMC/PK initiated a case to incorporate the award term incentive into the AFFARS 5317, Special Contracting Methods. Mr. Tim Beyland, Acting Deputy Assistant Secretary (Contracting) confirmed that AFMC is the first to implement this strategic purchasing tool. The current application of award term incentive is fee for services requirements or single award indefinite delivery/indefinite quantity depot maintenance contracts. AFMC is the primary procuring branch of fee for service and depot maintenance for the Air Force. Due to these factors, research was restricted to AFMC contracts.

Summary

Although prior research has developed models for strategic sourcing management for the commercial sector, no such model exists for the Air Force's award term incentive process of strategic sourcing management. The results from this research develop a model for strategic sourcing management by establishing performance-based long-term relationships with suppliers. The model will be used by the Air Force for cost reduction, technology development, cycle time reduction, and quality improvement. The award term incentive model was based on the commercial literature on strategic purchasing relationships and expanded to describe the Air Force tool. This research will add to the body of knowledge to be considered during acquisition strategy development and contract negotiations of the award term incentive. The following chapters include a

review of the literature, a description of the research methodology, a presentation of the research analysis and results, and a recommendation for future research.

II. Literature Review

Introduction

Chapter II is a literature review, which initially describes the need for acquisition reform and the implementation of best commercial practices. This is followed by a review of the types of supplier relationships and of the types of capabilities acquired. The strategic purchasing literature review includes purchasing partnerships and strategic relationships. The chapter provides a discussion of legal and regulatory environment and of the DOD economic market in which award term incentive strategies operate. Concluding this chapter is a review of the purchasing skill development literature.

Reform Initiatives Needed

During the early 1990's, many asked why DOD spending was continuing to increase. The answer is complex, including prior program obligation and commitments as well as the new requirement to combat simultaneous threats for two major regional conflicts. The DOD budget was reduced and acquisition leaders told to find savings to meet the threat requirements. Numerous commissions and studies have found the federal acquisition process to be slow, cumbersome, and costly. A primary way to achieve some of the hoped for peace dividend was to reform the acquisition process to emulate the private sector by incorporating best commercial practices.

The military is continuing to experience diminishing budgets and shrinking manpower. Therefore, the traditional approach of owning a capability or managing a large number of suppliers of a capability through arms length relationships is changing to

a more efficient sourcing management approach. Sourcing management, as defined by Monczka in Chapter I, requires integrating supplier capabilities into organizational processes to achieve a competitive advantage through cost reduction, technology development, quality improvement, and cycle time reductions to meet customers' requirements. It is important for the DOD to continue implementing commercial sourcing management practices to reduce mission capability costs and to reduce the cost of contract relationship management.

Commercial Practices

Public institutions regard the processes and methods employed in the private sector as commercial practices. However, commercial practices in one industry may not be applicable to another industry. Some studies have identified practices crossing industry boundaries, which provide companies with efficiencies not previously used in the public acquisition process (Templin and Heberling, 1994). Practices that have won awards or that are better than the current practice are considered best practices, but there is not a consensus on these descriptions. As identified in the DOD IPT Training Course, 2000, some criteria for assessing whether commercial practices are best are listed below:

- They have proven successful over relatively long time periods.
- They usually produce quantifiable results.
- They are usually innovative.
- They can be repeated, although this is often a most challenging task.
- They are not tied to specific locations or industries (DOD, 2000).

The DOD training course indicates that finding methods to implement best commercial practices to help IPTs achieve specific program goals is more important than identifying and mandating use of a commercial practice.

In the late 1980's, the acquisition corps was stagnated in rigid Government rules and standard operating procedures. The acquisition leaders have become fond of many best commercial practices and have mandated that some be applied on all programs. Some practices discussed are IPTs, performance specifications, commercial specifications, minimization of cost reporting, and the subject of this research, award term incentive contracting.

IPTs. The DOD leadership endorses best commercial practices that revolve around the integrated product and process development practice using IPTs. These multi-discipline teams are most effective when there is need for cross-functional communication. Implementation of joint contractor and DOD evolutionary development processes and risk management programs are essential to achieving results.

The tools used for implementing risk identification, such as production readiness reviews, understate the risks present in DOD programs. Ironically, commercial firms with more technology information still identified some risks as high that need to be resolved in production; where as DOD program managers, who accept more unknowns and technical advances, do not assess risks as high. Commercial program managers are motivated and rewarded to report technology failures early to prevent future profit losses. Many times DOD program managers find themselves in the role of program advocate and are more likely to report highly optimistic program outcomes (Christensen et.al., 1999). Although, DOD is using many of practices from the private sector, the implementation is not achieving the same results due to the different environment in which the DOD operates.

Performance Specification. Previously, DOD used design or product specifications that limited contractors' innovation in meeting the Government's needs.

Performance specifications provide flexibility to the contractor and enhance DOD's use of best value source selection processes. Risk of performance is shifted to the supplier and the Government pays a premium for this risk transfer. However, the possibility of innovative technological solutions may offset this premium in cost savings and value.

Commercial Specifications. Acquiring a capability using commercial specifications allows DOD to capture the savings and quality associated with a normal economic environment. By abandoning military specified items for commercial off-the-shelf products, the DOD is seeking market quality for a market price. Theoretically, the quality should be better and the price should be lower than the usual DOD monopolistic and monopsonistic environment. However, misuse of this commercial practice can lead to problems. For example, a commercial style contract was awarded sole source using firm-fixed prices for the C-130J aircraft. The "J" model incorporated the development of new technologies using commercial specifications and standards. The cost per aircraft has dramatically increased because of the military unique requirements.

Minimization of Cost Reporting. Submission of cost data is rarely imposed by the commercial world. Cost information may be shared within an established commercial supply chain. However, Government acquisition officials have come to rely on certified cost and pricing data since the passage of the Truth in Negotiations Act in 1962. In many cases, contractors have been forced to maintain two cost accounting systems. The cost of this expensive proposition is passed on to the Government in the form of higher overhead rates. The DOD has achieved cost savings from waiving this requirement. One example is the lowered flyaway cost of the C-17 production aircraft.

Award Term Incentive. Establishing longer-term strategic relationships for critical and some important commodity items incentivize industry investment and performance, while reducing government acquisition lead times and the overall cost of relationship management. Award term is an effective tool to emulate the long term strategic purchasing relationship found in the commercial sector where good performance is rewarded with continued business. An appropriate use of this commercial practice would be for a service that the government knows it will buy far into the future. The award term stabilizes demand, which incentivizes capital investment in the capabilities required. This type of incentive was lacking in previous DOD acquisition strategies.

Other Commercial Practices. Commercial practices can lead to the deployment of new capabilities faster, better, and cheaper if each unique program assesses which practices are best for their program. Simpler commercial style contract documents will encourage commercially innovative firms to do business with the DOD (Templin and Heberling, 1994). The commercial practice of performance based payments is not only a way to incentivize performance, but allows for the efficient management of program technical, schedule, and cost performance parameters.

DOD has heeded the call for implementation of best commercial practices. Templin and Heberling advanced the understanding of the need for commercial buying practices in the DOD by distilling information from three industry studies and two general studies. Their article, and the five previous studies introduced in Chapter I, identified and ranked important barriers to DOD acquisitions and the benefits that commercial practices can provide the Government. Reform initiatives resulted from

studies and from articles such as this one. These efforts laid the foundation for change for the DOD acquisition environment.

Types of Supplier Relationships

The literature supports the idea that the level of an organization's strategic plan for purchasing proceeds along a continuum (Fontenot & Wilson, 1997 and Paun, 1997). Before implementing strategic purchasing procedures, the organization needs to understand the various supplier relationships. Cavinato proposes a breakout of buyer-seller relationships (Cavinato, 1992):

1. Don't know supplier exists. Don't care.
2. Don't know supplier exits. Might use them if I did know, though.
3. Arm's length, price-oriented relationship: high value, low risk of obtaining in the marketplace, traditional (i.e. taxicab ride).
4. Price relationship; cooperative from time to time (i.e. returning pallets to the supplier to reduce the price of the next shipment).
5. Price relationship; collaborative over time (i.e. sharing demand forecasts with suppliers so they can level their manufacturing; helps reduce costs).
6. Total cost relationship; cooperating on total supply chain to reduce total costs (i.e. providing performance rather than product specifications to supplier so they can reduce manufacturing costs).
7. Value relationship; linking suppliers to customers to emphasize product/service value.
8. Joint ventures; complementary relationships uniting strong/weak attributes of companies.
9. Vertical integration strategies:
    a. purchasing capital assets for suppliers;
    b. buying supplier and treating as a subsidiary; and
    c. complete vertical integration of the capability

The first three relationships identified are based on price. The supplier reducing their costs so the purchasing organization can obtain the benefits of those reduced costs characterizes relationship type 4, 5, and 6. In numbers 7 and 8, the relationships become tools of strategy to achieve a competitive advantage. Here the supplier is coming together in an alliance with the procuring organization and with the customer. It becomes a teaming arrangement with the buyer acting as the coordinator and facilitator to meet the customers' need. Although the Government does not vertically integrate by owning part of a private firm, we do provide Government Furnished Property.

Nature of Capability

All acquisition strategies are based upon the type of capability being procured. Therefore, the type of purchasing relationship depends on the category of the capability. Kraljic offers a specific way to classify items as discussed below (Kraljic, 1983). Petrillo provides an integration of the types of relationships and the types of capabilities (Petrillo, 1998: 54-56).

Critical Capability (high value, high risk). This is the product (or product component) or service for which the firm is in business; the items that are central to the firm's distinctive technical capability or core competence. Core competencies are "key" or "fundamental" capabilities that will provide the firm's competitive edge and basis of value creation for the future (Freeman, 1990:44). For the DOD, a critical capability would be the mission of defending the Constitution, the United States, and its interests. Often there exist only limited sources of criticals, subject to the complexities and uncertainties of the environment. When procuring critical competencies, the most

sophisticated partnering relationships are employed. This type of relationship focuses on customer value as in the relationships of number 7 (value relationships) and number 8 (joint ventures), above.

Commodities (high value, low risk). These products (or product components) or services are part of the high value items that the firm needs to stay in business. To this degree, they are like the criticals, except they are readily available in the marketplace. We expect to see cost reduction relationships associated with these items, as those described in numbers 4, 5, and 6, above.

Generics (low value, low risk). These are the items the firm needs to operate the business. They are readily available in the marketplace and have little or no distinctive qualities. There is little or no risk associated with these items, and not much value to be gained by distinguishing one from another. We expect firms to try to minimize the time spent acquiring these products. Firms will try to maintain arm's length, lowest price relationships for these items, like those described in number 3, above.

Distinctives (low value, high risk). These are items that have been over specified. They offer no real value to the firm, but create risk due to their high cost and their unavailability in the marketplace. They are bottlenecks in the supply chain. We expect firms to be working to identify and eliminate these types of items.

By plotting requirements against concepts of value and risk, an organization can effectively make strategic purchasing decisions. Candidates for award term incentive should fall in the high value category for commodity or critical capabilities. Because of this, the strategies, management approaches, and tactics for commodity or critical purchases are in agreement with the award term acquisition strategy as expressed in

Figure 3. These "relationships tend to be oriented around relatively important purchase items" (Ellram and Edis, 1996:21).

Strategic Purchasing

Strategic purchasing is characterized by the management philosophy of longer-term contracts. Although there are fewer suppliers, the evaluation and selection process is intensive and extensive. Because the nature of the relationship horizon is longer, information systems are established. "The ultimate goal of such an information system is to make available to all participants in the supply chain all the information needed at the time" (Meredith and Shaffer, 1999:300-301). Problems are solved jointly and improvements are sought continuously. A fundamental premise of strategic purchasing is the equitable sharing of benefits (Stuart, 1993:23).

Purchasing Partnerships. Lisa Ellram offers a managerial guideline for the development and implementation of purchasing partnerships (Ellram, 1991). The article correctly forecasted that partnering would continue to expand and dominate the purchasing landscape throughout the 1990s. More importantly, Ellram asserted that partnerships would be a source of competitive advantage in most industries.

Difficulties in managing purchasing partnerships led to lessons learned that confirmed the basic principles of partnering that Ellram suggested. These basic principles are a) trust, b) communication, c) mutual benefit, d) long-term perspective, and e) top management support in both organizations. Although the article

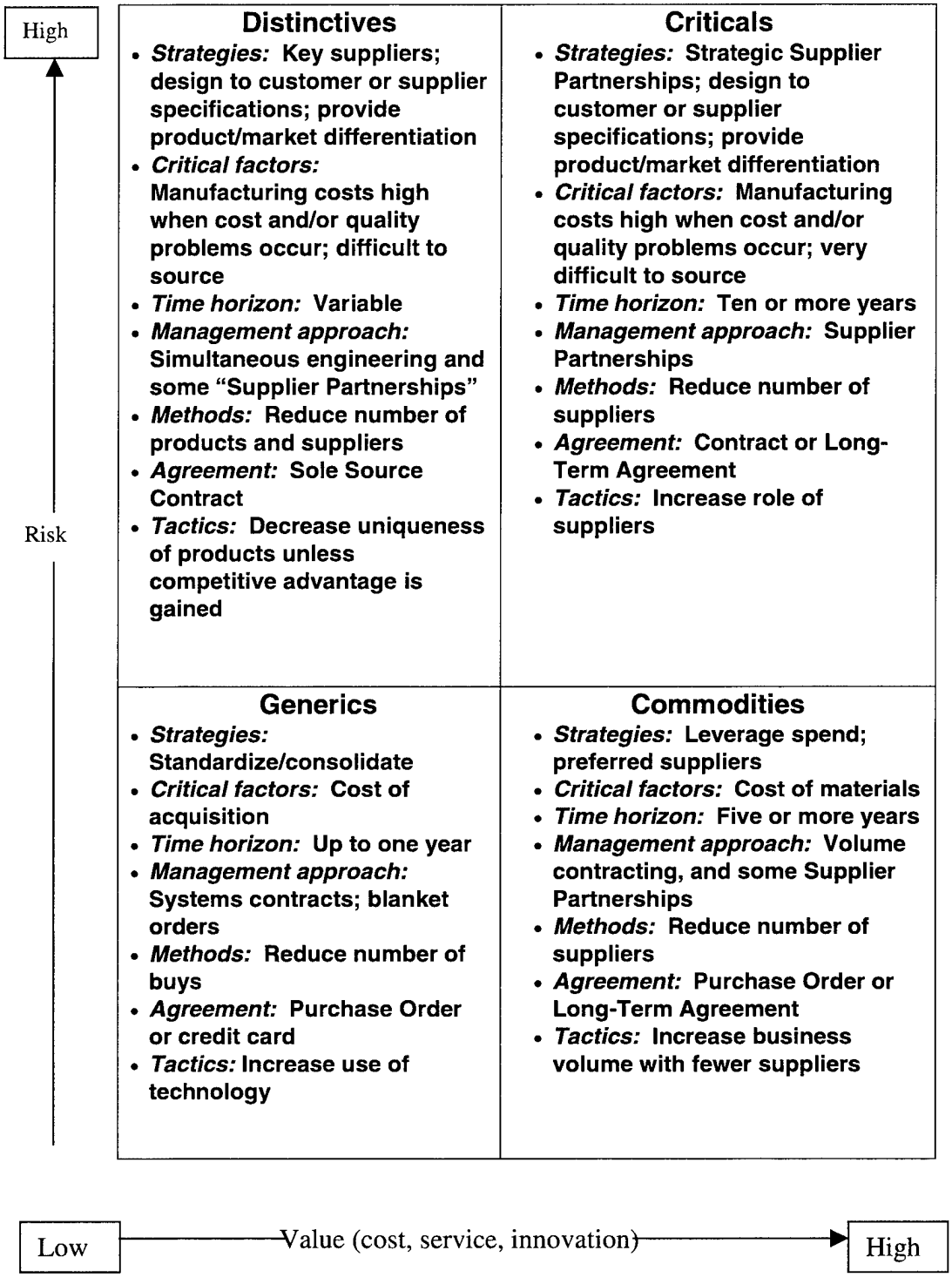

Figure 3: Adaptation of Typology of Capabilities Acquired (Kraljic, 1983)

specifically identifies these five principles as the foundation of successful partnerships, subsequent literature suggests that the issue of trust in the buyer-seller relationship is the cornerstone.

Trust in Partnerships. The meaning and origin of trust in buyer-seller relationships was investigated by Smeltzer (1997). He identified that there are two views of trust. Confidence in another's goodwill is the sociological view of trust based on faith in another's moral integrity. However, the business view of trust is the predictability of one's expectations based on confidence or risk. From the business view, parties attempt to mitigate uncertainty of adverse decisions and to control ethical hazards through formal contractual means such as guarantees, insurance mechanisms, and laws (Ring & Van de Ven 1994). Hosmer integrates these divergent views into one definition.

> Trust is the expectation by one person, group, or firm of ethically justifiable behavior--that is, morally correct decisions and actions based upon ethical principles of analysis--on the part of the other person, group or firm in a joint endeavor or economic exchange (Hosmer, 1995:383).

For this definition to be useful, purchasing professionals must agree on the definition of ethically justifiable behavior.

Legal Environment

The Federal Acquisition Streamlining Act of 1994 implemented the Government's preference for the acquisition of commercial items and broadened the definition of commercial items. This Public Law (103-355) established the acquisition policies to resemble the commercial market place for commercial items and components. In 1995, Part 12—Acquisition of Commercial Items—was added to the FAR and the DOD's supplements. Since then, reform of government specifications and standards has taken

place. In late 1998, the FAR Part 15—Source Selection Procedures—was completely rewritten. The entire DOD acquisition process is still under going changes to identify, capture, and implement best commercial practices to manage our supply chain.

Public law continues to support the requirement for socioeconomic programs, the mandate for competition, and DOD's flexibility to terminate for convenience, which are industry barriers to DOD acquisitions (Templin and Heberling, 1994). DOD's funding instability will impact the ability to manage the supply chain. This is especially true for award term contracts that do not have an exemption from competition.

The Federal Acquisition Streamlining Act broadened the definition of commercial items. This and other reform initiatives are allowing wide latitude in trying best commercial practices and are encouraging the use of performance-based specifications and commercial standards. However, DOD's priced based competition initiative is contrary to managing the supply chain as exhibited by the cutting edge of commercial practices to gain insight through cost based analysis

The award term concept is not covered by regulation and has not been subject to litigation at this time. When implementing an award term incentive strategy, it is important for the team to consider the impact of laws and regulations. Some laws and regulations to consider are economic price adjustments (EPA), the Competition in Contracting Act (CICA), the Contract Disputes Act (CDA), and the award term clause. The contractual authority to extend the contract will be a unique award term clause.

Economic Price Adjustment. The FAR does not discuss the renegotiations of award term prices. However, in the case of fixed-priced options, the General Accounting Office (GAO) has held that renegotiations of option prices when competition is available

would constitute a sole source acquisition (Magnavox, 1988). Therefore, it would be prudent not to renegotiate award term prices. To mitigate the inherent risk in longer term pricing commitments, the contract should include an EPA clause for fixed-priced award term incentives as described in FAR (FAR, 2000:16.203). The team must be aware of the limitation of an EPA clause; for example, it does not cover changes in indirect rates.

Competition in Contracting Act. The draft guidance does not address possible requirements for a Justification and Approval (J&A) for sole source award of term extensions. This may occur if the supplier evaluation and selection did not include prices of all the possible term extensions contemplated by the contract. If all the periods under the award term extensions were not priced, a J&A would be required by CICA. It is unlikely that the GAO would consider an unpriced or not-to-exceed priced award term to be within the scope of the competition. Based upon this assumption, solicitations should require offerors to propose prices for the maximum award term extension and the Government should evaluate them during source selection.

Contract Disputes Act. The CDA of 1978, as amended (41 U.S.C.601-613), establishes procedures and requirements for asserting and resolving claims subject to the Act. Recently, the Federal Circuit Court of Appeals held that an agency could not write a contract condition to circumvent the provisions of the CDA (Burnside-ott, 1997). An example of the result of this decision is the amendment to the FAR for award fee clauses. Prior to the decision, FAR 16.405(e)(3) required award fee clauses to "expressly exclude from the operation of the Disputes clause any disagreement by the contractor concerning the amount of the award fee" (FAR, 1997). This FAR part was renumbered and was rewritten at FAR 16.406 (e)(3). FAR now requires the award fee clause to "expressly

provide that the award amount and the award-fee determination methodology are unilateral decisions made solely at the discretion of the Government" (FAR, 2000). Based on the court decision and on the similarities of the award fee and award term concepts, the award term decision is subject to the Disputes process.

Award Term Clause. The contract should also specify the initial contract term or ordering period, as well as the minimum and maximum contract term or ordering period. The FAR mandates the use of both positive and negative incentives "to the maximum extent practicable" (FAR 2000:37.602-4). Therefore, the award term clause should provide for extensions or reductions within the minimum and maximum term. An award term clause must be incorporated into Section H of the RFP and into any resulting contract. A sample award term clause is provided in Table 1.

Nature of the Market

Stimulating the push for increased use of commercial practices is the belief that the free market will allow for the establishment of strategic purchasing relationships regardless of whether the DOD or a private entity is the buyer. A review of four groups of theories will examine whether this assumption is true. The four theories—classic microeconomics, contestable markets, transactional cost economics, and game theory—all contribute to an understanding of how strategic relationships that the DOD enters into are established.

Classic Microeconomics Theory. Federal purchasing statutes have attempted to force-fit the DOD acquisition environment into the classic free-market theory in which

Table 1: Sample Award Term Clause (AFMC, 2000: 111)

(a) The initial _____ year [contract term or ordering period] may be extended or reduced, on the basis of contractor performance, resulting in a(n) [contract term or ordering period] lasting a minimum of ____ years from the date of contract award to a maximum of _____ years from the date of contract award.

(b) Monitoring of Performance. The contractor's performance against the measures of merit will be continually monitored by the performance monitors whose findings are reported to the Award Term Review Board (ATRB). The ATRB recommends award term points to the Term Determining Official (TDO) who makes the final decision of the award term points based on the contractor's performance during the award term evaluation period.

(c) Award Term Plan. The evaluation criteria and associated grades are specified in the award term plan. The evaluation periods with the associated award term extensions/reductions and performance criteria with associated award term times are also specified in the award term plan.

(d) Modification of Award Term Plan. Unilateral changes may be made to the Award Term Plan if the contractor is provided written notification by the PCO before the start of the upcoming evaluation period. Changes affecting the current evaluation must be by bilateral agreement.

(e) Self-evaluation. The contractor will submit to the Contracting Officer (CO) within ___ working days after the end of each award term evaluation period, a brief written self-evaluation of its performance for that period. This self-evaluation shall not exceed ___ pages. This self evaluation [will or may] be considered in the ATRB's evaluation of the contractor's performance during this period.

(f) Award Term Extension. The contract ordering period may be unilaterally modified to reflect the TDO decision. The total contract ordering period including extensions under this clause will not exceed ___ years. If at any time the ordering period or contract term has ___ years or less remaining, the operation of the award term feature will cease and the ordering period will not extend beyond the term set at that time.

(g) Award term determinations and the methodology for determining award term are unilateral decisions made solely at the discretion of the Government.

market forces set the terms and conditions of the relationship (Gansler, 1989; Heberling and Graham, 1993; and Peterson, 1987). The Competition in Contracting Act requires the DOD and other agencies to acquire its goods and services via full and open competition. This lofty requirement fails to recognize that DOD acquisitions generally occur in a market characterized by oligopoly, monopoly, or monopsony conditions. The market becomes less effective as it moves away from perfect competition. For example, as the number of sellers decreases, the amount of control over the terms and conditions of the agreement exerted by an individual seller increases (ASPM, 1986: 2-3).

Contestable Markets. Contestable market theorists believe that a market comprised of a monopoly or oligopoly can still provide the benefits of perfect competition. A perfectly contestable market is one in "which entry is completely free, from which exit is costless, in which entrants and incumbents compete on complete symmetric terms, and entry is not impeded" (Baumol, 1982:349). Entry and exit barriers can result from government laws and regulations.

Experts agree that the military industrial base does not operate in a free market. Many important assumptions of free market economic theory are absent from the defense market (Gansler, 1989:158-160). One missing characteristic is free entry and exit from the market, conditions necessary for contestable markets. Another contestable market characteristic missing is a pool of potential entrants able to respond quickly to a market opportunity (Bailey and Baumol, 1984:120-121).

Transactional Cost Economics. Transactional Cost Economics (TCE) is an interdisciplinary theory combining organizational and economic theory with components of contract law. The cost of the transaction is the friction that occurs between the parties

to an exchange (Williamson, 1981). Templin finds there are transaction costs associated with proposal preparation and with source selection activities that increase significantly as the number of unique requirements increase (Templin, 1994).

Transaction costs increase for the suppliers to DOD contracts because of the vast number of unique acquisition laws and regulation. One comparison found it is five times more expensive to propose on defense solicitations than commercial invitations. Further, this study found it costs three times more to administer a defense contract than a commercial effort (Center for Strategies and International Studies, 1993).

Game or Bargaining Theory. Game theory holds that competitors will propose unrealistic, below-cost prices in an attempt to win a contract. FAR states that a buy-in occurs when a contractor submits an offer below anticipated costs with the intent to (1) increase the contract amount after award through unnecessary or over-priced change orders or (2) receive follow-on contracts at artificially high prices to recoup the losses experienced in the initial contract (FAR, 2000:3.501-1). Gansler finds that the Contracting Officer can play the oligopoly game, in which they play the contractors against one another in an attempt to win promises of high performance, low cost, and early delivery (Gansler, 1989). Such a strategy further encourages the contractor to buy - in, with the intent of later recouping losses.

Heberling and Graham recommend that the DOD must anticipate and counter contractor pricing strategies to prevent or mitigate buy -ins. The Government should limit the use of noncompetitive, follow-on contracts by pricing the primary contract and all of the follow-on vehicles at the award of the initial contract (Heberling and Graham, 1993).

The competitive pricing of all potential award term incentive extensions is one mechanism for preventing buy-ins.

Acquisition Corps' Capabilities

The philosophy and roles of acquisition professionals have evolved in the DOD over the last decade. A recent RAND study illustrates how the philosophy and roles are changing from transaction oriented to a strategic relationship role (RAND, 1999). Figure 4 identifies and depicts the affect of changing management roles. As the relationship moves from transaction to strategic based, the relationship becomes more labor intensive and the number of people needed to manage the relationship increases.

Size and Stability of Work Force. The study identifies that arms-length transactions are established and executed with few people. However, as the strategic importance of the relationship increases, the manpower required to establish and execute the relationship increases. In a study of 100 pairs of buyer-supplier partners, successful "partnerships tend to be developed by a team, with the full support and cooperation of top management" (Ellram and Edis, 1996: 21). The intensity of strategic purchasing "relationships limits the number that can be managed effectively, usually about 1 percent or less of the purchasers supplier base" (21). This indicates DOD needs to establish stable teams to implement successful strategic purchasing relationships. Management should consider the labor intensity of the strategic relationship and the current size of the work force when implementing strategic relationships.

Strategic Purchasing Skills. Over the past few years, the role of contracting has begun to play a more significant role in the establishment of strategic purchasing

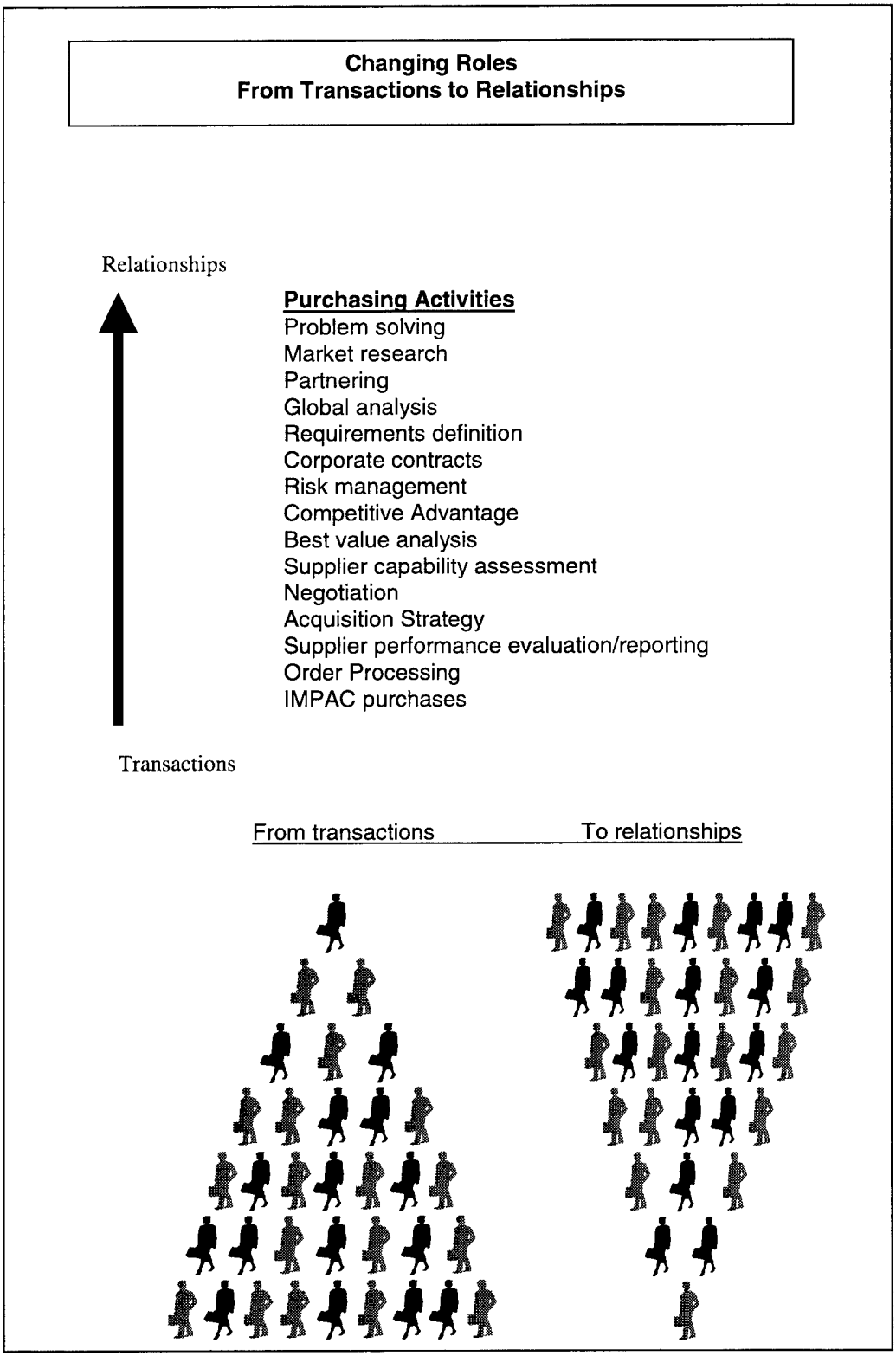

Figure 4: Adaptation of Changing Roles (Rand and Casbon, 1999)

relationships. Freeman and Cavinato indicate that the human skills of the purchasing function must be congruent with the strategies of the organization (Freeman and Cavinato, 1990:7). Therefore management must identify and "tailor its personnel skills to the needs of the total organization" (10). Historically, the purchasing function was viewed as clerical and not strategic by some organizations. In a longitudinal empirical study on strategy development by David Farmer, it was "found that the top managers did not realize the importance of developing the expertise in the purchasing function" (Farmer, 1978:7). The acquisition corps for the DOD will need the skills to think strategically in planning and in establishing strategic purchasing relationships.

Summary

This chapter reviewed the literature that describes the need for acquisition reform and the implementation of best commercial practices. The description of best commercial practices provided a discussion of IPTs, performance specifications, commercial specifications, minimization of cost reporting, award term incentive, and other commercial practices. This was followed by a review of the types of supplier relationships and the nature of the capabilities acquired. The strategic purchasing literature review included purchasing partnerships, strategic relationships, and the acquisition corps' capability needs for implementing award term incentive. The chapter provided a discussion of the legal and regulatory environment and of the DOD economic market in which the award term incentive strategy will have to operate. The four economic theories discussed were classic microeconomics, contestable markets,

transactional cost economics, and game theory. Chapter III discusses the methodology that will be used to collect and analyze the data available.

III. Research Methodology

This chapter discusses and explains the research design selected for this case study. A qualitative method was chosen using multiple case studies as well as a comparative analysis. The three-part research design of sources of data selection and validation, protections of quality, and data analysis was used to implement the methodology. An explanation of the relationship between the research questions and the interview questions is provided in this chapter. Finally, a discussion of the data analysis process is provided and the research methodology is summarized.

Case Study Design

Although the terms qualitative and case study are frequently interchanged, they are not synonymous. Case studies can rely on the use of qualitative data, quantitative data, or a combination (Yin, 1994:14). This method may include a single or multiple case design. Multiple case studies are undertaken to replicate and/or test a previous study (45). This means that the data observed are similar across several cases and are used to draw conclusions. This approach is taken to ensure that the observed phenomenon is not a rare case. The use of multiple case studies is different from sampling logic in quantitative studies, where the results of a number of samples are assumed to be predictive of the entire population (47).

The qualitative method is distinguished by the researcher's interaction with the subjects while gathering data. Categories derived from the study are not precisely identified before hand, but the categories emerge with study progression (Creswell,

1994:7). Information may be verified by observing the pattern in different categories. This study is characterized by the interactive nature between the researcher and the subjects in question. The interviews completed by the researcher took place over the telephone or in person. Follow-up questions were asked immediately to clarify points in the research. As possible patterns in the data developed, the interview response category was modified to aid the search for patterns in the data.

The qualitative method is often used to investigate a new topic whose characteristics are still unknown. This is known as exploratory research and is used because no model has been developed about the topic (Creswell, 1994:9). "The social sciences are filled with concepts that are difficult to operationalize for scientific analysis" (Petrillo, 1998:87). For example, it is easier to discuss supplier relationships than it is to observe its application or measure its value. Latent variables, such as trust, sometimes affect the factor but are unobservable and difficult to test quantitatively (87).

Inductive and Deductive Reasoning. Theory or theoretical model based research cycles consist of a few repeating steps: induction, deduction, and tests. After testing, the results contribute to another induction, and the sequence begins again. The induction phase develops general relationships that may explain specific observations. Deduction derives specific assertions from general principles. Therefore, induction moves from the level of observation or indicator to the level of theory or constructs. Conversely, deduction moves for the level of theory to the level of observation (Dooley, 1995: 65-66).

Although commercial strategic purchasing relationships are discussed in the literature, there is no previous research data available regarding award term incentive

contracting for use as a basis for this study. Case study methodology has a distinctive advantage when asking "how, what or why" questions about a contemporary phenomena "over which the investigator has little or no control" (Yin, 1994: 5- 9). This research concerns itself with the inductive phase of the research cycle proposed by Dooley and discussed above. The literature review, document review, and the interview observations and information collected proposes order to the data through inductive reasoning. As a result of the researcher/subject interaction required, of the exploratory nature of the study, and of the inductive reasoning, the qualitative method was chosen as the appropriate method. This research provides reasonable answers to the research questions and establishes a model that can be tested in future research.

Sources of Data

The selection of award term incentive contracts was by purposive sampling. In purposive sampling, the researcher chooses which cases to include as opposed to random sampling.

Interviews. The cases in this research include interviews with the acquisition professionals of the entire population of Air Force award term incentive contracts that were awarded prior to June 2000 and are currently employing the award term strategy. All of the Air Force's award term incentive contracts were awarded by AFMC. Every command in the Air Force has different supplements to the FAR. If acquisition professionals were selected from another command, the internal validity of the comparative analysis would be weakened. Further, AFMC is the lead command for procuring logistics capabilities and fee for services. Due to these factors, research will

be restricted to AFMC contracts. The cases selected were identified using the automated management information system (AMIS).

Contract Documents. This case study focused on the strategic purchasing relationship; therefore, analysis of the interactive relationship included the single acquisition management plan (SAMP), the award term clause, the award term plan, and other documents in the government contract files.

Literature. Literature and archival sources of data such as books, journal articles, professional magazines, regulations, contract documents, and contract files relating to the commercial strategic purchasing method and to the award term incentive were analyzed. This effort was undertaken to discover the characteristics and relationships of Air Force strategic purchasing. This enabled the researcher to look "for constructs that bring order to the descriptive data and that relate these data to other research findings reported in the literature" (Gall et al., 1996:549).

Protections of Quality

A case study methodology, like all research designs, needs to ensure standards of quality are met for construct validity, internal validity, external validity, and reliability (Yin, 1994). Actions to assure quality in each area are discussed below.

Construct Validity. Two tactics that Yin (1994) recommends to ensure construct validity are used in this research effort. First, data is collected from multiple sources to facilitate a triangulation of converging lines of inquiry. Triangulation of data sources and of theory-based perspectives on the same data was accomplished where possible. A second tactic used is to establish a chain of evidence. Yin recommends case study

database development. Further, the research report should cite relevant portions of that database:

> The principle is to allow an external observer or reader of the case study, for example—to follow the derivation of any evidence from initial research question to ultimate case study conclusions (98).

Construct definition, validity and measurability is sharpened through an iterative analysis of the evidence for each construct (Eisenhardt, 1989:533). This was achieved by conducting within and between case analysis. The comparative analysis conducted further strengthens operational construct definitions (Cooke and Campbell, 1979).

Internal Validity. Internal validity deals with establishing a causal relationship---where certain conditions lead to other conditions (Yin, 1994:33). Inte rnal validity would not normally be applied to an exploratory study such as this. However, the resulting model does reflect proposed causal relationships between variables or factors that were identified. Pattern matching helps establish that inferences about data collected are correct. Between case pattern matching strengthens internal validity (109-111). Explanation building through iterative comparative analysis between cases builds internal validity (111). Comparison of the new model to literature with similar findings links the phenomena. This strengthens the internal validity and raises the findings to a higher conceptual level (Eisenhardt, 1989: 544).

External Validity. External validity deals with the generalizability of the findings from the cases in this study to other cases. To strengthen external validity of this research, multiple cases were studied (Yin, 1994:45). A comparison to the literature sharpened the external validity (Eisenhardt, 1989:533). Analyzing data within the framework of several established commercial strategic purchasing models contributes to

the external validity of the research (Ellram 1995; Landeros, Reck and Plank, 1995; Stuart, 1993; Ring and Van de Ven, 1994; Watts and Hahn, 1993).

Reliability. Reliability demonstrates that another researcher using the same data collection procedures and the same cases could find the same results. "The goal of reliability is to minimize errors and biases in the study" (Yin, 1994:36). Yin recommends that a case study protocol and database be used to ensure the final quality criterion of reliability. Organizing and documenting all the information in a study database markedly increases the reliability of the research (95). Case study procedures for this research were documented in the protocol and study database that are discussed in the next section.

Data Analysis

Participants in the research were informed of the goals of the study. Participants were guaranteed confidentiality in order to encourage open, honest discourse during interviews. Data collected was known in detail only by the researcher and advisors (Schmitt and Klimoski, 1991).

Protocol. In a qualitative study, the researcher is considered the primary instrument of data analysis (Creswell, 1994:45). However, to organize data gathering, a protocol or form is needed. The protocol for this research is an open-ended set of questions designed to allow a natural flow of conversation. The cases in this research were investigated using the same protocol, which aids in identifying patterns in the data. The protocol includes the following two forms: the initial telephone contact guide at Appendix A and the interview guide at Appendix B.

To ensure each contact was informed of the same information, the researcher used the initial telephone contact guide. A set of basic questions was addressed during the interviews and while reviewing the literature and documentation. The questions act as reminders to the researcher of the data to be collected, as recommended by Yin (1994). Schmitt and Klimoski characterize interviews as "conversations with a purpose" (1991:139). The questions addressed to research participants are open-ended and dynamic in order to facilitate rich discourse. The interview questions were initially mapped to the study's research questions as follows:

Research Question 1: What is different about the functional capability of what we are buying that requires the establishment of strategic contractual relationships using award term incentive contracts?

1. What is the capability or function that is being procured using award term incentives?
2. Is the item unique to DOD?
3. What are the risk and criticality of the capability or function?
4. Is this function being outsourced? If yes, is this function considered a near core competency and why is it being outsourced?

Research Question 2: How are long-term strategic supplier relationships established using the award term incentive in the public procurement environment?

5. What contract type was used and why?
6. How does the Competition in Contracting Act (CICA) at 41 U.S.C. 253 and FAR subpart 6 affect the solicitation, selection, and management of the award term incentive process? CICA requires contracting officers to promote and to provide for full and open competition in soliciting offers and awarding public contracts.
7. How does the Service Contract Act at (4) U.S.C. 353 (d) which provides that contracts that are subject to the Act may not exceed 5 years affect the solicitation, selection, and management of the award term incentive?

8. How does the Anti-deficiency Act affect the solicitation, selection, and management of the award term incentive process? Specifically, what is the affect of government unique appropriations, authorizations, and funding limitations?

9. How does the Truth-in-Negotiations Act affect the solicitation, selection, and management of the award term incentive process?

10. What other laws or regulations that affect the solicitation, selection, and management of the award term incentive process?

11. Were any unique terms and conditions incorporated in the contract? If yes, what and why?

Research Question 3: What is the nature of the DOD competitive market when using the award term incentive?

12. What characterized the market for this acquisition?

13. Did the supplier operate in a competitive market?

14. Did the supplier have a competitive edge?

15. Does the solicitation or the contract contain organizational conflict of interest provisions? If yes, why was it necessary? Did it affect the competitive market?

16. Was there a potential for a buy-in?

17. What steps, if any, were taken to prevent a buy-in?

Research Question 4: *What capabilities do the downsized acquisition corps need in order to plan and implement the strategic supplier relationship using the award term incentive?*

18. What role did the participant play in the case?

19. How long has the participant served in the current position?

20. How much experience does the participant have in related areas?

21. Has the participant used an award term incentive before?

22. How often are team members transferred?

23. Has the Term Determination Official changed since award of the contract?

24. Has the participate received or provided award term incentive training?

Database Coding. Notes were kept during data collection in the field and on the telephone. Data points collected from each document or interview were reduced to separate computerized note cards. All note cards from a single source were coded (A-1-01 through E-4-24) to maintain linkage with the data source. The alpha code references the case. The middle number refers to the research question. The last two-digit number refers to an interview question associated with that case.

Analysis Coding. Initially, three types of analysis coding were used during different stages of the investigation (Strauss & Corbin, 1990). These coding types were open coding, axial coding, and selective coding. Open coding was used to categorize the data, which is similar to developing descriptive statistic. Building on the open coding, axial coding developed connections between the cases. To help assess the overlapping information between categories the variables from the open coding and the axial coding were pattern coded and evaluated across the cases in support of the selective coding. Selective coding was used to synthesize the information into the new model.

The coding process used a method called mind-mapping (Buzan & Buzan, 1993). This type of radiant thinking allows thoughts to generate in all directions from a central idea, where every idea becomes the nucleus of a new group of ideas. This technique is known as concept-mapping in the psychological literature and is explained as metacognitive (Novak, 1998). According to Novak, metacognative learning transpires as a person obtains a broad strategy that assists learning or comprehending new information. The mind mapping strategy was beneficial in assembling the information within the cases

(open coding), in detecting emerging phenomena between the cases (axial coding), and in maturing a model to explain the phenomena (selective coding). The results from the mind-mapping process will be discussed further in Chapter 4.

Variable pattern coding was employed to support the selective coding between cases. This allowed the researcher to refine the definition of the constructs identified by open and axial coding. Pattern coding identified variables that cross between the focus areas, which provided a transition to the selective coding to build the model. A refined association of the pattern coded variables to the research question and the operational definitions developed by this research area identified in Appendix C.

Comparative Analysis

A comparative analysis was conducted between the award term strategic purchasing model and the literature. One of the purposes of this research is to identify the factors for implementation of strategic purchasing relationships within the DOD. The comparative analysis examined the strength of the explanation provided through the award term model that was not addressed by the AFMC award term guide.

Summary

The primary aim of this exploratory, qualitative case study was to develop a model that can help explain the award term incentive strategic purchasing tool. This study attempts to identify the characteristics and examine the factors for strategic contractor relationships using award term incentive contracts. The research was stimulated by the recent acquisition strategy direction provided by the Secretary of the Air Force, Principle Assistant Deputy for Acquisition to implement the commercial

practice of rewarding performance with a continuing contractual relationship. Additionally, this investigation was motivated by AFMC's FAR counsel Case 00-03 for a change to AFFARS regulation and by AFMC's new award term guide.

Several steps were taken to ensure the quality of the research. Five contract actions using the award term incentive were researched. The multiple-case study design and the use of broad investigative questions facilitated discovery of compelling and robust findings. A comparative analysis was conducted to determine whether the data fit the model better than the AFMC guide document.

Results of this exploratory research are reported and analyzed in the next chapter. The findings will facilitate future research that will be possible after the award term incentive tool has been fully executed. Further, the results will assist decision-makers as they continue to develop policy guidance necessary to ensure successful implementation of this best commercial practice. The next chapter introduces the results of the within case analysis and presents the results of the between case analysis and of the new model comparative analysis to the literature.

IV. Results and Analysis

This chapter presents the information gathered and the detailed analysis performed on the five acquisitions of this exploratory research. This research identifies the unique factors the DOD acquisition workforce will experience when implementing the award term incentive method of sourcing management. This chapter is divided into four major sections beginning with an overview of the data collected and analyzed. The within case analysis is briefly introduced. This is followed by the results of the between case analysis section including an emergent model. Concluding this chapter, selective coding refines the emergent model into the development of the analytical model. The model is supported by a discussion of the case analysis findings and a comparative analysis to the literature.

Overview of the Data

A review of AFMC files resulted in the identification of five cases currently using the award term incentive acquisition concept. Case information was gathered from interviews and document reviews. Most of the information was gathered from personal interviews with government contracting officers and contract negotiators through field visits, telephone communications, and electronic mail communications. However, some information was gleaned from program and contract file documentation such as the single acquisition management plan, the award term plan, the award term clause, and the contract.

Within Case Analysis

This section consists of a sample of the analysis resulting from one of the five cases studied. The complete results of all five within case study sections, one for each of the programs reviewed can be found in their entirety in Appendix D. Each section addresses only the information gathered from that particular program. The within case analyses are addressed in no particular order of importance. The presentation of each of the within cases follows a uniform and set format. Each case is divided into a background section and into four focus sections. The background section provides general information about each program, the dollar value of the acquisition, the contract length, and the experience level of the contracting professionals. The four focus sections are Nature of the Capability, Legal and Regulatory Environment, Nature of the DOD Competitive Market, Acquisition Corps' Capabilities. These sections were developed from the four research questions.

1. What is different about the functional capability of what we are buying that requires the establishment of strategic contractual relationships using award term incentive contracts?

2. How are long-term strategic supplier relationships established using the award term incentive in the public procurement environment?

3. What is the nature of the DOD competitive market when using the award term incentive?

4. What capabilities does the downsized acquisition corps need in order to plan and implement the strategic supplier relationship using the award term incentive?

The information in the four focus sections was open-coded using concept/mind-mapping techniques (Novak, 1998:27 and Buzan & Buzan, 1994:139). A pictorial representation of the resulting map is presented for each within case analysis. A sample

of the Nature of the Capability section for Case D follows. The sample mind map for the Case D analysis provides a quick overview of the type of analysis completed for each case in the research effort.

Case D.

Nature of the Capability. This program procures availability of pilot training simulation services. The simulation service is provided on an individual simulator and is linked locally to same aircraft type simulators. The service provides the capability to be linked long haul through a network provider to other same aircraft type simulators and to be linked long haul through a network provider to different aircraft type simulators. These services were determined to be of a commercial type and procured under FAR Part 12. DOD is currently the only customer of this service. However, there is a potential FMS market for this type of simulation service. This is because of the unique training required such as flying in formation, air to air tactical mission training, and evasive maneuvers. There does not currently exist tactical training except in the aircraft.

Procuring availability of simulation type training as a service reduces the risk associated with training in the aircraft. In fact, significant portions of the training will be completed solely in the simulator. Simulators provide training with destructive weapons, in high-risk maneuvers, and in interoperability at reduced cost of training in the aircraft. Previously we own the trainers, now we are contracting for the availability of the service. The interviewee indicated that having trained pilots to fly missions is near the Air Force core competence to perform the mission.

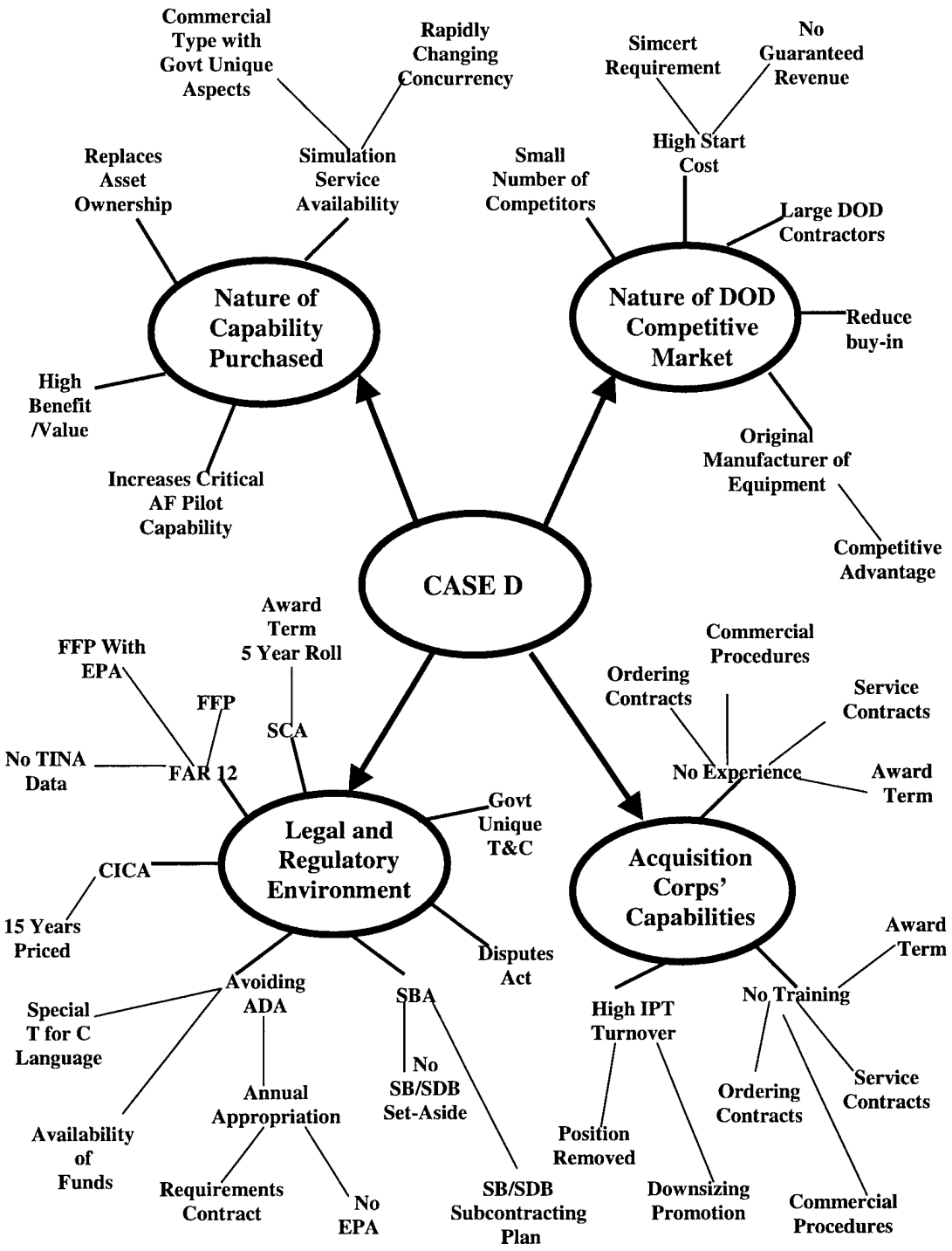

Figure 5: Sample Case D Open Coded Mind Map

The suppliers have the technical expertise or can hire subject matter experts to provide the simulation service. By removing the government from the process, the supplier can implement concurrency upgrades much faster as we no longer have the manpower. Further, there was no development and procurement money available to maintain concurrency or to meet the new interoperability training requirement.

Between Case Analysis

This section is divided into six major parts; the four focus area parts developed from the research questions, summary of the pattern coding, and the emergent model. The evolving ideas from across all the cases are synthesized into descriptions of the phenomena regarding each research question. Axial coding developed connections between the cases. The variable pattern coding identifies overlapping information among the focus areas used for the selective coding. The between case analysis results in the refining of the conceptual award term incentive model into emergent model.

The within case analysis open coding was accomplished using mind mapping techniques. To compare ideas across cases, axial coding was also accomplished using mind maps. In this phase, the four focus areas were placed in the center of the map. Then the ideas for that focus area were taken from each of the five open coded mind maps for the individual cases. Each idea radiated from that center point. The radiant thinking technique allowed the researcher to organize the ideas without being prejudiced by the sequence or strength with which they were presented by the different interviewees.

The number of ideas that evolved from these mind maps are more complex than those from the within case analysis. The mind maps were useful for data analysis, but

became burdensome for presentation purposes. Therefore, a summary of the data across the five cases was necessary. Table 2 cross lists the ideas regarding each of the four focus areas and presents them in tabular form. In this table, one can easily see the ideas emerging. For example, concerning the nature of the capability procured, the notion that type of capability procured affects the need to use the award term incentive for sourcing management is evident across all cases. The ideas from the maps were develop into an emergent model that describes the phenomena regarding the questions. This emergent model is presented at the end of this between case analysis section.

Nature of the Capability. This first focus area attempts to identify what is different about the capability being procured that requires a long-term contractual relationship using the award term incentive. All five of the cases identified the capability to be very near the AF core mission. All five of the cases involve the procurement of services. The five cases determined the benefit or value of the relationship exceeded the cost of implementing the strategic relationship for these high dollar value services. Four of the cases clearly involve acquisition of leading edge technology services that do not exist in the AF today. Case E acquires a service to maintain current technology. Except for Case E, the other cases involved reducing risk to mission performance.

Three of the cases procured the service to replace previous government ownership of the assets. Case C procured a privately operated network service other than the government owned network. Case E considered the possibility of outsourcing the

Table 2: Between Case Summary of Findings Regarding the Four Focus Areas

	Case A	Case B	Case C	Case D	Case E
Nature of the Capability	Near core mission Service High benefit/value Rapidly changing concurrency Replaces owning asset Commercial Competitive	Near core mission Service High benefit/value Rapidly changing concurrency Replaces owning asset Commercial Competitive	Near core mission Service High benefit/value Rapidly changing technology Substitute for owned asset Govt Unique Competitive	Near core mission Service High benefit/value Rapidly changing concurrency Replaces owning asset Commercial Competitive	Near core mission Service High benefit/value Changing Tech Orders Replaces owning facilities and equipment Commercial Competitive
Legal and Regulatory Environment	Miss application of SCA limitation FAR 12 acquisition CICA ADA avoidance SBA Award term not subject to Disputes Act Govt unique terms and conditions	Correcting miss application of SCA limitation FAR 12 acquisition CICA ADA avoidance SBA Award term not subject to Disputes Act Govt unique terms and conditions	 FAR 15 acquisition TINA CICA with class J&A ADA avoidance SBA Disputes Act applies to award term OCI	Miss application of SCA limitation FAR 12 acquisition CICA ADA avoidance SBA Award term not subject to Disputes Act Govt unique terms and conditions	 FAR 12/Quasi FAR 15 acquisition CICA ADA avoidance SBA Award term not subject to Disputes Act Govt unique terms and conditions
Nature of DOD Competitive Market	Limited number of suppliers Large DOD contractors High capital investment OEM Long term reduces potential buy-in	Limited number of suppliers Large and small businesses DOD and non-DOD contractors High capital investment No other market Long term reduces potential buy-in	Large number of suppliers Large and small businesses DOD and non-DOD contractors Low investment Commercial market Long term reduces potential buy-in	Limited number of suppliers Large DOD contractors High capital investment OEM Long term reduces potential buy-in	Limited number of suppliers Public offeror and Large DOD contractors High proposal cost Commercial Market Long term reduces potential buy-in

Table 2: Between Case Summary of Findings Regarding the Four Focus Areas (continued)

	Case A	Case B	Case C	Case D	Case E
Acquisition Corps' Capabilities	Acquisition professionals must be expert in services, in ordering contracting, and in commercial procedures Acquisition professionals need a broader base of experience and training Identify future capability needs and implement strategic purchasing skills development program Need Mgt support for stable acquisition team	Acquisition professionals must be expert in services, in ordering contracting, and in commercial procedures Acquisition professionals need a broader base of experience and training Identify future capability needs and implement strategic purchasing skills development program Need Mgt support for stable acquisition team	Acquisition professionals must be expert in services and in ordering contracting Acquisition professionals need a broader base of experience and training Identify future capability needs and implement strategic purchasing skills development program Need Mgt support for stable acquisition team	Acquisition professionals must be expert in services, in ordering contracting, and in commercial procedures Acquisition professionals need a broader base of experience and training Identify future capability needs and implement strategic purchasing skills development program Need Mgt support for stable acquisition team	Acquisition professionals must be expert in services, in ordering contracting, and in commercial procedures Identify future capability needs and implement strategic purchasing skills development program

capability through a private/public competition and no longer owns all the facilities and equipment to support the assets. Four of the cases were determined to be of a commercial type and Case C was determined to be government unique. Of the five cases, only Case E's service was clearly available in the commercial market place. However, each case had aspects to varying degrees of a commercial service and to varying degrees of a government unique service or of a government unique application.

Legal and Regulatory Environment. This second focus area attempts to identify the controlling laws and regulation in the establishment of strategic purchasing relationships using the award term incentive within the public procurement environment. In all five cases, actions were taken to avoid ADA violations, to comply with the CICA, and to comply with SBA requirements. Various government or program unique terms and conditions were incorporated by all five cases. Cases C and E understood the SCA five-year performance limitation does not apply to award term incentive clause. Cases A, B, and D misapplied the SCA five year performance limitation and plans to mechanically limit the number of terms on the contract at any given time. Even if the supplier has earned additional terms, terms will not be added until only 4 terms remain on the contract. Cases A and D have included the SCA implementing clause and Department of Labor (DOL) Wage Determination (WD). A DOL WD was inappropriately applied to Case B, however, the contract is being modified to remove this requirement.

The type of capability being procured was determined to be government unique for Case C. Therefore, Case C contracted by negotiation under FAR 15. Cases A, B, and D followed FAR 12 acquisition of commercial item procedures. Case E's private offerors competed under FAR 12 procedures, but the public offeror was required to

comply with portions of FAR 15 procedures. All of the cases, except Case C, inappropriately exempted the Term Determining Official's decision from the disputes process.

Nature of the DOD Competitive Market. This third focus area attempts to identify how the implementation of the strategic purchasing relationships using the award term incentive strategy affects the market we procure from. Ironically, the four cases for services deemed to be of a commercial type with government unique aspects had a limited number of suppliers. Of these four cases, a commercial market for the service existed for Case E. Case C had a large number of suppliers for the service that was determined to be government unique with commercial aspects. There is a commercial market for Case C's service. Further, the competition for three of the cases' commercial services was large business DOD contractors or a team of small business contractors. The competition for the Case E commercial service was a large business DOD contractor team and a public offeror with a large business DOD partner. The suppliers for the Case C government unique service were large and small business suppliers with a commercial business base.

Four of the cases involved high start-up cost and one case involved high proposal cost. Cases A, B, and D had government certification barriers and high financial risk. Case E had labor knowledge barriers and high financial risk to private suppliers. The Case C had low start-up cost and few market entry barriers. One DOD imposed market entry barrier for potential suppliers under Case C was the inclusion of an organizational conflict of interest (OCI) clause. There was clearly a competitive advantage for the awarded suppliers for Cases A and D. The interviewee for Case E asserted there was no

competitive advantage between the public team and any private teams. There was clearly no competitive advantage for the awarded suppliers for Cases B and C.

The first four cases are managing risk by shifting it to the supplier. Case E attempted to shift the performance, schedule, and cost risk. Certainly, the closing base no longer manages this risk, but the government still bears this risk for the portion of the service provided by the new public provider. All five cases indicate the pricing or not-to-exceed (NTE) pricing of potential award term periods reduces the potential for supplier buy-in. Using the award term incentive to shifting technical and cost risk reduced supplier buy-in all five cases.

Acquisition Corps' Capabilities. This last focus area attempts to identify the affects force structure reduction has on DOD's ability to plan and to implement long-term relationships using the award term incentive. In all five cases, none of the contracting professionals had received any award term incentive training. Only the contracting officer for Case C had prior experience using the award term tool. The contracting professionals in Cases C and E were experienced in buying services. The interviewees in Cases A, B, and D had no services buying experience. Their experience was with supply contracts. The contracting professionals in Cases C and E were experienced in using ordering type contracts. The interviewees in Cases A, B, and D had never used indefinite delivery/indefinite quantity (ID/IQ) or ID requirements ordering contracts. Their experience was with systems or subsystems definitive contracts. Except in Case E, none of the contracting professionals had experience using commercial procurement procedures.

There was an indication by all the acquisition professionals that a broader base of experience is needed in the related procurement processes when using the award term incentive. Further, they indicated that additional training is needed as the number of services and commercial type procurements increase. In one case, the interviewee confessed that the limited training provided for commercial acquisitions was inadequate due to the lack of experience of the trainers. In Case C, the contracting professional has provided formal award term training to the TDO. In Case E, the contracting professional has provided informal training by sharing document with other organizations and has conducted evaluation process training for award term evaluators. In four of the cases, the contracting professionals were unaware of the FAR changes regarding the CDA under the similar award fee concept. In all cases, the professional indicated a lack of time to stay current with the dynamic DOD acquisition regulations.

In Cases A, B, C, and D, members of the IPT were reassigned due to government downsizing. In the same four cases, members of the IPT were promoted to other positions left vacant by early retirement incentives or normal attrition. Core members, of Case E's IPT remained stable throughout the selection process for the largest award term incentive contract implemented. However, the IPT for Case E experienced 100% turnover within the first year of contract administration. Case E's IPT will be experiencing another large change in membership when the base closes. Some members of the IPT will choose not to relocate.

Pattern Coding. The overlapping information among the categories of the variables identified with the open and axial coding was pattern coded to assist the researcher. Table 3 summarizes the pattern coded data across the cases. The ideas from

Table 3: Summary of Pattern Coded Data

PATTERN CODES	CASE A	CASE B	CASE C	CASE D	CASE E
Core/Near	X	X	X	X	X
Value	X	X	X	X	X
CC	X	X		X	
CT			X		
CTO					X
ROAsset	X	X		X	
Sub Asset			X		
ROFE					X
Ser	X	X	X	X	X
Comm	X	X		X	X
Uniq			X		
Comp	X	X	X	X	X
SCA	X			X	
FAR 12	X	X		X	X
FAR 15			X		
Mult-KT			X		
Lim-KT	X	X		X	X
NTEP			X		
EP	X	X		X	X
TINA			X		Some Data
CICA	X	X	X	X	X
CJ&A			X		
OCI			X		
T for C	X	X	X	X	
ADA	X	X	X	X	X
A-Fund	X	X	X	X	
A-Appro	X	X	X	X	X
ID/Req	X	X		X	X
ID/IQ			X		
SBA	X	X	X	X	X
PPC					X
SB/SDB Plan	X		X	X	
Dis-A	X	X		X	X
UniqTC	X	X		X	X
Cont-Bus	X	X	X	X	X
F-B&P	X	X	X	X	X
Fin-R	X	X	X	X	
Tech-R	X	X	X	X	X

Table 3: Summary of Pattern Coded Data(Continued)

I-B&P	X	X	X	X	X
R-Buyin	X	X	X	X	X
Leg Reg	X	X	X	X	X
Sm#Sup	X	X		X	X
Lg#Sup			X		
LgBus	X	X	X	X	X
SmBus		X	X		
LgBusT					X
SmBusT			X		
DODSup	X		X	X	
PubSup					X
ComBusB			X		X
NComMkt	X	X		X	
HSC	X	X		X	X
LKB					X
DP	X	X	X	X	
BC					X
PR	X	X	X	X	X
CT		Poor Qual	Poor Qual		
OT					X
ST					
AT					
CE					
OE		X	X		X
SE		X	X		X
AE		X			

the within and between case analysis were used in pattern matching and selective coding for the emergent model as well as the final analytical model in the next major section.

Emergent Model. The within and between case analysis results identified overlaps of information among the four focus areas. For example, if the nature of the capability is a commercial type then this variable overlaps the purchasing skills needed to procure commercial item. The model shown in figure 6 began to emerge. It reveals a relationship flow between the four focus areas. Following the same example, a

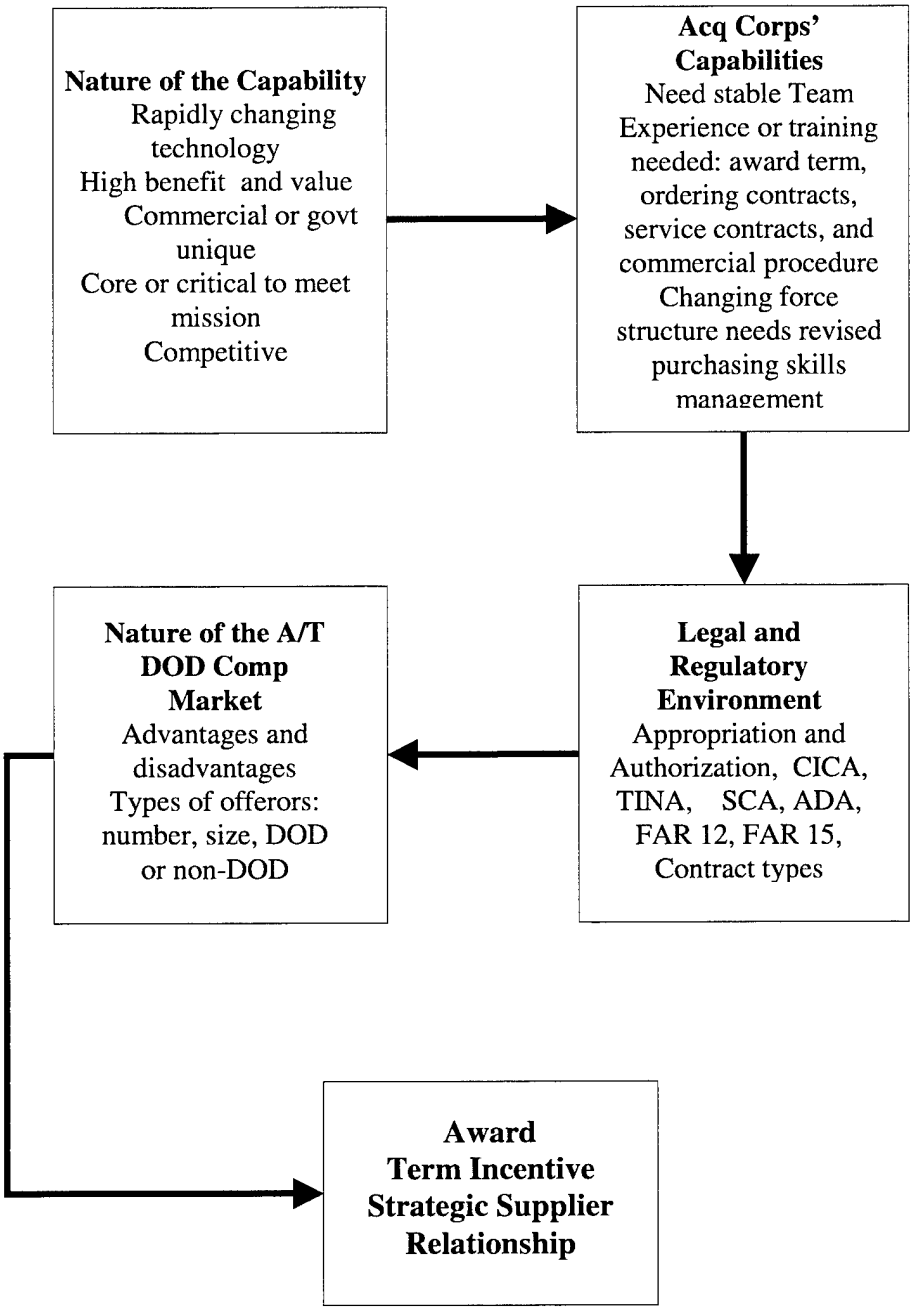

Figure 6: Emergent Model

commercial type item determines the use of FAR 12 procedures. The use of FAR 12 procedures lowers the entry barriers to conducting business with the DOD. Therefore, the type of capability flows through to the establishment of the strategic purchasing relationship.

Comparative Analysis of the Analytical Model

This section contains two major parts, the analytical model and the comparative analysis. The model is a pictorial description of the phenomena regarding the research questions. The comparative analysis section discusses the results of the findings, of the case data, and of the comparison to the literature in support of each module of the model.

Analytical Model. Selective coding was used for model building, which is the application of selected parts of the data. This was an iterative process, returning each time to the within case analysis, to the between case analysis, and to the literature. This part provides an overview of the master flow chart and presents three sub-charts. The master flow chart describes the overall award term strategic purchasing model. Three of the major modules explode into individual sub-charts.

The master flow chart in figure 7 contains 13 modules. The first five modules leading to the sixth module identifies decision criteria for selecting the award term strategy. Specifically, modules three, four, and five are associated with the first research question regarding what is different about the capability being acquired that requires a strategic purchasing relationship.

Module seven is associated with the fourth research question regarding what capabilities does the acquisition corps need to implement the award term strategy. If the

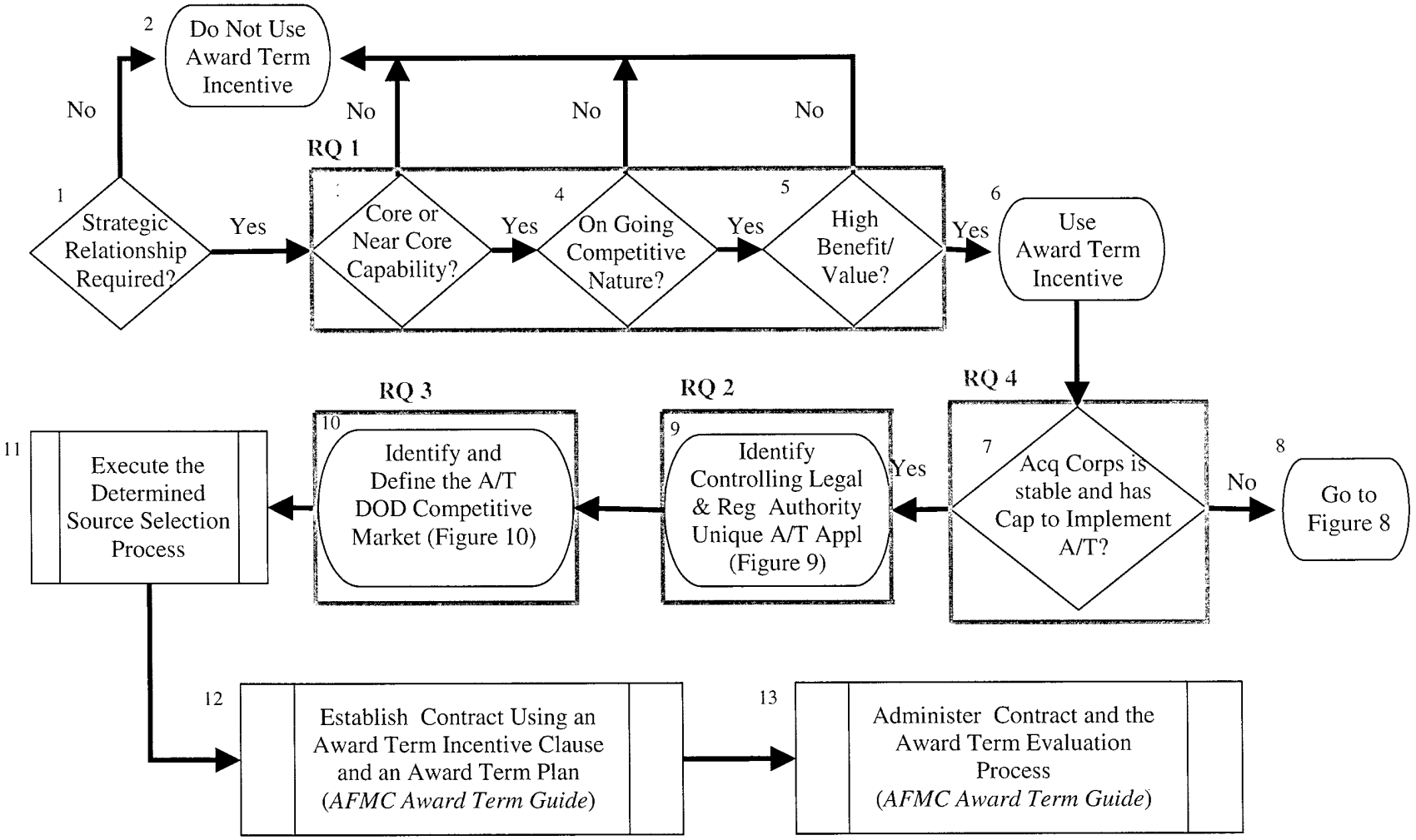

Figure 7: Award Term Strategic Purchasing Model Master Flow Chart

acquisition corps experience or skills are insufficient then module eight directs the reviewer to proceed to figure 8. Figure 8 provides recommendations and guidance for developing the acquisition corps strategic purchasing skills. This figure is discussed in the comparative analysis part of this section.

Module nine is associated with the second research question regarding the establishment of strategic purchasing relationships using the award term concept in the public procurement environment. Module nine directs the reviewer to proceed to figure 9. Figure 9 provides a detailed plan for evaluating the controlling legal and regulatory authority and award term unique application. This figure is discussed in the comparative analysis part of this section.

Module 10 is associated with the third research question regarding what is the nature of the DOD competitive market when using the award term incentive concept. Module 10 directs the reviewer to proceed to figure 10. Figure 10 identifies market advantages and disadvantages of implementing the award term incentive concept. Further, this figure provides a detailed plan for determining the competitive market. This figure is discussed in the comparative analysis part of this section.

Module 11 directs executing the determined source selection procedures. Module 12 directs establishing the contract using an award term incentive clause and an award term plan (ATP) using the AFMC award term guide which provides detailed examples. Further, the guide provides step-by-step instructions for administering the evaluation process identified by module 13. Modules 11 through 13 are identified as part of the model, but were not measured by this research. Therefore, modules 11 through 13 will not be discussed further.

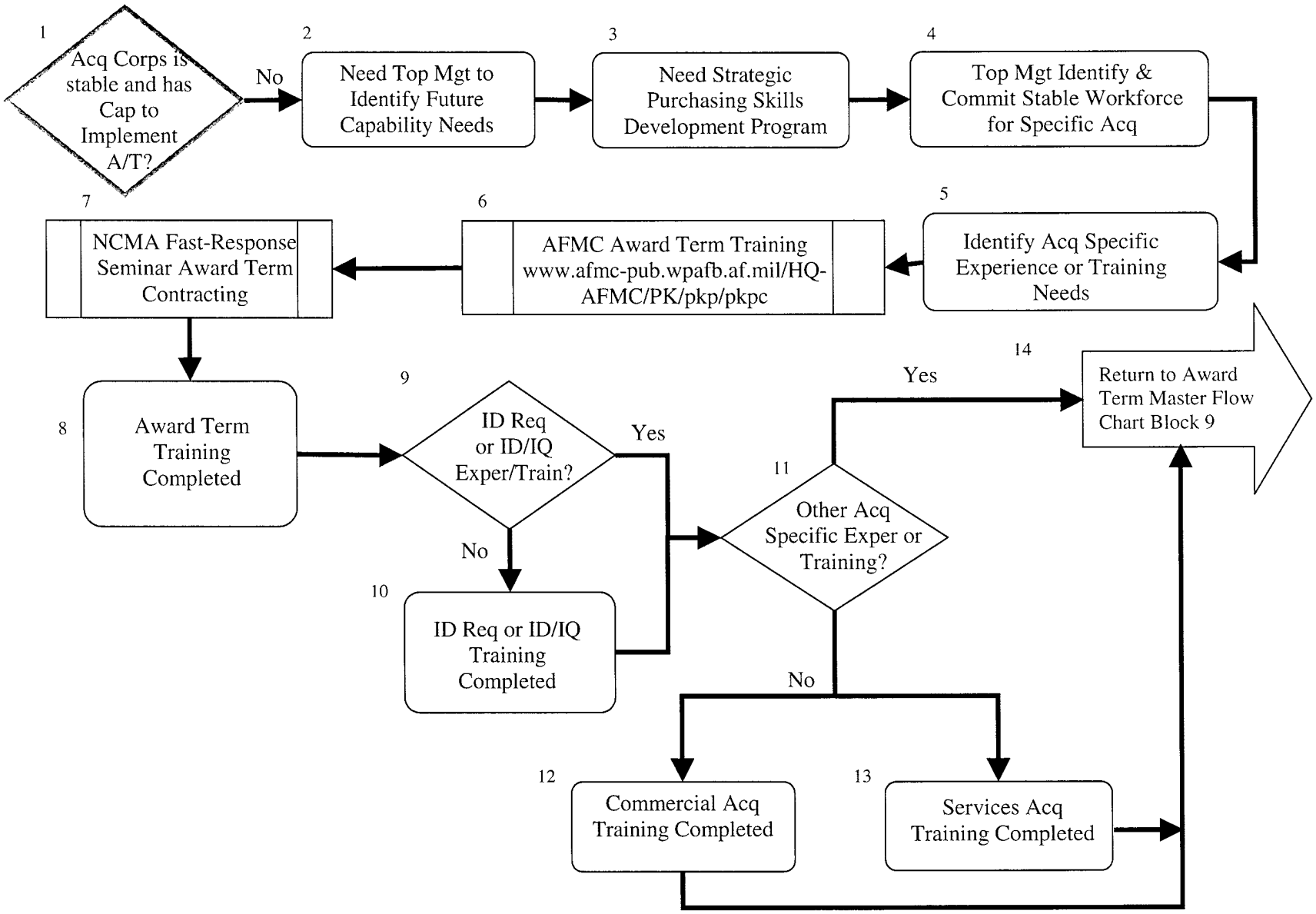

Figure 8: Acquisition Corps Capabilities

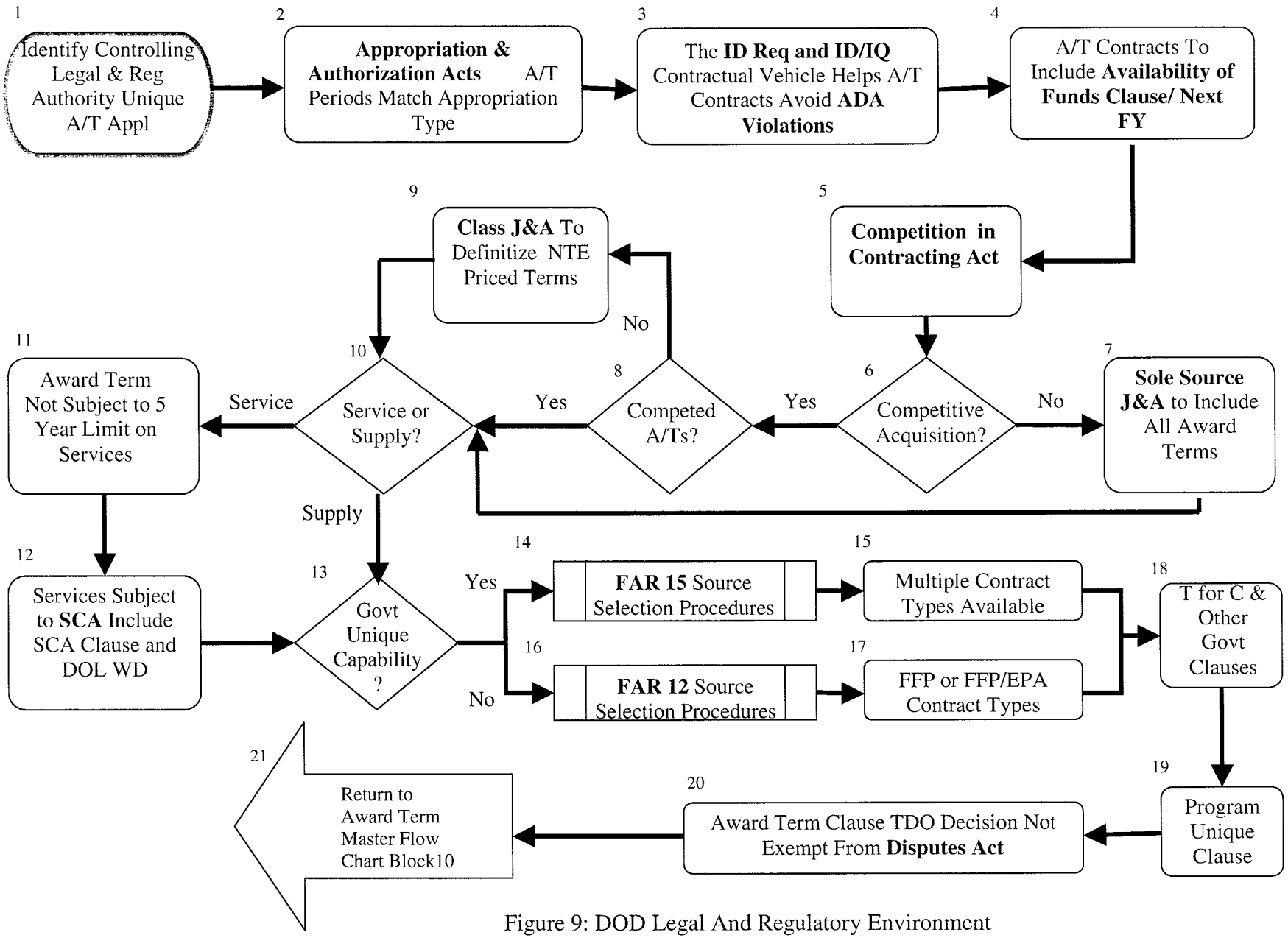

Figure 9: DOD Legal And Regulatory Environment

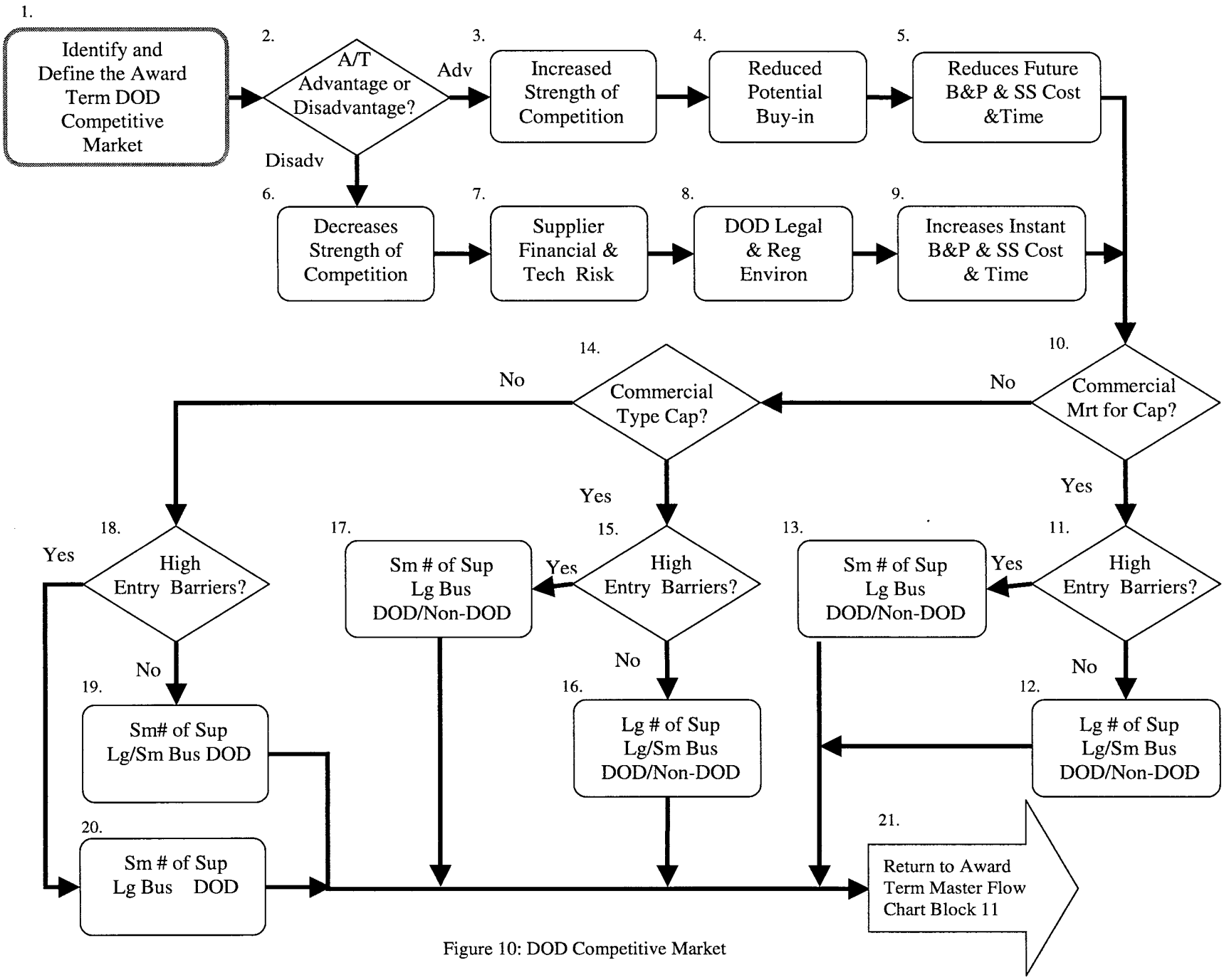

Figure 10: DOD Competitive Market

Comparative Analysis. The second part of this section provides a comparative analysis of the cases and of the literature associated with each of the modules of the master flow chart of the model. Further, this section provides a comparative analysis of the three sub-charts of the model. The results and findings for the model follows the four focus areas developed from the research questions. However, the order of the four focus areas follows the order from the master flow chart.

Nature of the Capability. The first module of the master flow chart asks is a strategic relationship needed. From the literature review in Chapter II, if the item is determined generic or if the relationship is based on price then a strategic relationship is not needed (Cavinato, 1992; Fontenot & Wilson, 1997; Kraljic, 1983; and Paun 1997). Therefore, move to module two and do not use the award term incentive.

Proceed through the award term decision criteria if the need for a strategic relationship is affirmative. The third module asks is the capability a core or near a core competency to execute mission critical efforts. The literature supports not implementing a strategic relationship for commodity capabilities, where the relationship focuses only on cost reduction efforts (Cavinato, 1992; Fontenot & Wilson, 1997; Kraljic, 1983; and Paun, 1997). In four cases studied, the capabilities are near a core competency in support of mission critical capabilities. For example, Case C provides long-haul network capability allowing pilot and crew training between multiple weapon system platforms in direct support of the Expeditionary Air Force deployment concept. Case E is a core competency, but is outsourced because of government reductions in capacity.

The fourth module asks is there an on-going competitive nature for the capability. The DOD awards long term, sole source contracts for critical and distinctive capabilities

where there is not an on-going competitive market. It is not that the DOD is over specifying these items, but the nature of the capability is leading edge, military only technology. An example is the stealth technology for major weapon sy stems. Some other type of incentive other than award term incentive should be considered for non-competitive distinctive and critical capabilities. The literature supports limiting the use of sole source, follow-on contracts by pricing the primary contract and all of the follow-on vehicles at the award of the initial contract (Heberling and Graham, 1993). The on-going competitive nature of the capability with the potential for the continuing the business relationship develops a competitive advantage for the buyer (Templin and Heberling, 1994 and Ellram, 1991). The capabilities for all five cases researched have an on-going competitive nature. This is supported by the fact that Case C's technology has a commercial application, Case E's service is commercially available, and Case A, B, and D's technology is of a commercial type.

The fifth module asks does the high value of the relationship provide sufficient benefits to offset the cost of the relationship. The five cases' values ranged between $131.9 million and $10 billion over a 15-year period of performance. In all five cases, the potential savings from cost reductions, technology development, cycle time reductions, and quality improvements was determined to exceed the additional cost associated with establishing and maintaining a strategic purchasing relationship (Monczka et. al., 1998). The Chapter II literature review supports judiciously establishing strategic relationships where the value to the customer exceeds the cost of the relationship (Cavinato, 1992; Ellram and Edis, 1996; and Rand and Casbon, 1999).

Responding yes to the decision criteria modules results in a determination to employ the award term incentive for the acquisition at module six. Module seven asks if the acquisition corps is stable and has the strategic purchasing capabilities. If unsure of the answer, proceed to the eighth module, which directs the viewer to figure 8.

Acquisition Corps' Capabilities. The first module of figure 8 is a restatement from the master flow chart. The second and third modules are recommendations regarding the identification and development of strategic purchasing skills within the acquisition corps. As cited in Chapter I, Mr. Gansler identified performance based service acquisition as the fastest growing procurement method in the DOD and as one of his highest priorities. However, the skills to accomplish this type of acquisition are not identified nor have the purchasing skills developed within the ranks of the remaining members of the acquisition corps. The literature identifies that the skills of the purchasing function must be congruent with the strategies of the organization (Freeman and Cavinato, 1990,7). Management must identify and "tailor its personnel skills to the needs of the total organization" (10). As supported by findings in the literature, management appears to be unaware of the importance of developing strategic purchasing skills (Farmer, 1978).

The interviewees in the cases indicate they performed extensive research to gain the knowledge required for implementing the award term concept. Due to downsizing, the remaining members of the acquisition corps have less time to maintain currency with the changing regulations. Their inability to remain current is exemplified by the fact that following extensive research four out of the five cases inappropriately excluded the award term decision process from the disputes process in the award term clause. The

finding from this research recommends mandatory just-in-time training before implementing an award term strategy.

The fourth module recommends management identify and commit a stable core IPT for the planning and implementation of strategic purchasing relationships. Phase 1 of the commercial supplier relationship model identifies forming a team with top management commitment as a factor for developing a successful relationship. Review of the literature in the development of this model identifies internal uncertainty as negatively influencing the development of the relationship (Ellram and Edis, 1996: 22). Case E received management support to maintain core IPT stability during the source selection. However, within a year from award of the contract the team experienced complete membership turnover. The other four cases report extreme instability in core IPT membership. In the four years since the start of acquisition planning for Case A, this program has had four different contracting officers, four different program managers, two different contract negotiators, and one engineer. Since award of the contract, the Term Determining Official (TDO) for the award term has changed twice. The interviewees in the other four indicate instability impacts efficiency and effectiveness in implementing a strategic purchasing relationship.

The fifth module directs the IPT to identify acquisition specific training needs. As there is no DOD regulatory guidance for award term, Air Force personnel should review the AFMC Award Term Guide, as well as, the training briefing provided at the web site within module 6. The guide provides an example of the award term clause and a detailed plan for developing and executing the award term plan. If this guidance had previously existed then four out of the five cases would not have exempted the award

term decision from the disputes process. Module seven identifies a National Contract Management Association one-day seminar on award term contracting as another source of training. Module eight records the completion of award term training.

The AFMC Award Term Guide identifies the ID/requirements and ID/IQ contractual vehicles as the most appropriate types when implementing the award term concept (AFMC, 2000). Module nine requests the IPT to identify the need for this training. A few of the acquisition professionals interviewed had experience or training in the use of ordering contracts. All other interviewees prior experience and training was in the use of definitive contracts. Module 10 records the completion of ID requirements or ID/IQ training. The training for these types of ordering contracts is more extensive than award term and is outside the scope of this research.

Module 11 requests the IPT to identify other skills needed for the specific acquisition. Information from the cases indicates the acquisition corps does not have adequate experience or training in services and commercial contracting procedures. The AFMC product centers procurement focus is in the acquisition and maintenance of government unique major weapon systems and subsystems. AFMC has not focused on the acquisition of services or commercial type items.

Module 12 records the completion of commercial acquisition procedures training. FASA's redefinition of commercial to be of a type, not necessarily commercially available, increases the likelihood that procurements using the award term strategy will be following commercial procedures. Cases A, B, D, and E employed commercial procedures with the award term strategy. Of those four cases, only Case B indicates receiving training in commercial contracting procedures and assesses the training as

inadequate because the experience base does not exist in the government. The interviewees insinuated that the trainers lacked actual experience and were unable to provide the level of detail needed to develop this strategic purchasing skill. The training for commercial procedures is more extensive than award term and is outside the scope of this research.

Module 13 records the completion of service acquisition training. Using award term in conjunction with the procurement of supplies is acceptable. However, all five of the cases are for the procurement of services. Only Cases C and E acquisition professional had any experience using service contracts. The newly appointed contracting officer for Case B has service contracting experience, but the prior contracting officer did not. Inadequate training resulted in the misapplication and misinterpretation of the SCA five-year length limitation. Cases A, B, and D misapplied the SCA five year performance limitation and plans to mechanically limit the number of terms on the contract at any given time. Even if the supplier has earned additional terms, terms will not be added until only four terms remain on the contract. The training for service contracting procedures is more extensive than award term and is outside the scope of this research.

The interview information indicates that implementing the award term concept using the newly available training is not difficult. However, without the related purchasing skills, acquisition professionals report loss of efficiency and effectiveness to plan and implement the award term strategic relationship. Therefore, the finding of the research recommends management identify as a top priority the development of ordering, of commercial procedures, and of service purchasing skills within the acquisition corps

under the strategy purchasing skills module three. Module 14 directs returning to the master flow chart at module 9.

Legal and Regulatory Environment. The ninth module of the master flow chart directs the viewer to figure 9. The first module identifies that figure 9 provides a detailed plan for evaluating the controlling legal and regulatory authority with award term unique application. The second module identifies that the appropriation type matches the length of the award term extensions or reductions. It is important to understand that the constitution provides that "...no money shall be drawn from the Treasury but in consequence of appropriations made by law" (Steamer, 1992). All five of the cases provide extensions in the same length as the appropriation type. This helps ensure the order periods will match the appropriation type.

The third module identifies the use of ID requirements and ID/IQ contractual vehicles assist program administrators to avoid Anti-deficiency Act (ADA) violations. Single award "ID/IQ and requirements contracts allow additional contract terms to be added without committing future fiscal year budget before it is appropriated" (AFMC, 2000:8) These two contractual vehicles avoid violating the ADA because the government does not incur an obligation until the order is issued. However, the ID/IQ does obligate the government to order the minimum order quantity to establish consideration for contract establishment (FAR, 2000:16.5). The ID requirements contract incurs no minimum obligation as exclusivity of the contractual arrangement establishes contractual consideration. These contractual arrangements are used "when a recurring need is anticipated" (16.5). All five of the researched cases use these two contractual vehicles to reduce the risk of an ADA violation.

The fourth module identifies the need to ensure the contract is clear that the government's obligation with regard to award term extensions is conditioned upon the availability of funds or availability of funds for the next fiscal year clauses. All of the contract cases incorporate these clauses to help avoid ADA violations. The AFMC guidance is consistent with this recommendation (AFMC, 2000:8).

The fifth module identifies the requirement to comply with the CICA at 41 U.S.C. 253 and with the FAR part 6 requirements. CICA requires contracting officers to promote and to provide for full and open competition in soliciting offers and awarding public contracts. The sixth module asks if this is a competitive acquisition. If not competitive then move to module seven and process a sole source J&A to include all the award terms (FAR, 2000:6). If this is a competitive acquisition, move to module eight and answer if all the award terms were competed. If not, move to module nine and process a class J&A to definitize the award terms in a sole source environment (6). All of the award term periods are competitively awarded in four of the cases. Case C has a class J&A pending to definitize the award terms in a sole source environment.

Modules seven, eight, and nine proceed to module ten, which asks if the procurement is a supply or a service. If this is a service, module 11 notifies the viewer that the contract term is not limited to 5 years. This is consistent with the understanding of the contracting officer in Case C and an iterative review of the literature. Specifically, James Barager's, Col, USAF, Deputy Assistant Secretary (Contracting) Assistant Secretary (Acquisition), understanding of the Services Contract Act (SCA) is the rendition of services beyond the five years for an additional period for effort not included in the original five year base period is considered a wholly new contract (Barager, 1992).

This understanding is with respect to the application of Section 4 (d) of the Act's provision. Deputy Assistant Administrator of the US Department of Labor(DOL), Mr. Daniel Sweeney, confirms this understanding as long as no single extension period if greater than five years (Sweeney, 1992). Cases E and C are for services but the type of effort is not subject to the SCA. Cases A, B, and D are subject to the SCA and have included the appropriate FAR clauses and attached the DOL wage determinations to the contract as indicated in module 12. However, the interviewees indicate they are limiting the addition of award terms to no more than five years at any given time in order to comply with the five year limitation. The acquisition professionals for three cases are unaware of the DOL's interpretation that extensions are not subject to a five-year limitation.

From module 12 or module 10, module 13 asks if the capability is government unique. If yes, proceed to modules 14 and 15 to conduct source selection using negotiated procedures with multiple contract types available for implementation (FAR, 2000:15 and 16). Case C's contract used the negotiated procedures with cost reimbursement, time and material, and firm-fixed price (FFP) contract types. If this procurement is a commercial type then proceed to modules 16 and 17. The controlling regulation is the FAR 12 procedures with FFP or FFP with economic price adjustment (EPA) type contracts (12 and 16). "Including an economic price adjustment clause helps mitigate the inherent risk in longer term pricing commitments," (AFMC, 2000:8). Cases A, B, D, and E were FAR 12 procurements using FFP EPA type contracts.

Module 18 identifies the requirement to include a termination for convenience (T-for-C) of the government clause and other government unique clauses. While the AFMC

guide discusses the affect of T-for-C using award fee, it does not provide a discussion regarding T-for-C using award term (AFMC, 2000:36). However, the NCMA Award Term Contracting Seminar identifies that the T-for-C "will probably affect the motivational power of the award term incentive" (NCMA, 2000: 2-13). All of the cases incorporate the T-for-C and other government unique clauses. An example of a government unique clause was used in Case C. To be considered for award, the offerors had to agree to the inclusion of an organizational conflict of interest (OCI) clause. This clause is required because the supplier for Case C is establishing standards and defines the network interface requirements for the other simulation service suppliers. Further, the network supplier can be a technical advisor in future simulation services source selections.

Module 19 identifies program unique clause. A program unique clause for Case C is the Defense Information Service Network (DISN) clause. This clause allows the Government to direct the supplier to provided the connectivity using DISN. The change would to be negotiated using this clause as the authority. Another example of a program unique clause is found in Case E, which includes a workload volume guarantee allowing the supplier to submit a request for equitable adjustment if the volume changes greater than plus or minus 25 percent. The most notable program unique clause in all five cases is the award term clause. The AFMC award term guidance now provides suggested language for an award term clause, which is provided in Chapter II at table 1 of this document.

Module 20 identifies that the award term decision is subject to the Contract Disputes Act. Based on review of the literature from a Federal Circuit Court of Appeals

decision and on the similarities between the award fee and the award term concepts, the award term decision is subject to the CDA (Burnside-ott, 1997, FAR 1997, and FAR 2000). However, four out of the five cases exempted the award term decision from the disputes process in the award term clause. Module 21 directs returning to the master flow chart at module 10.

Nature of the DOD Competitive Market. The tenth module of the master flow chart directs the viewer to figure 10. The first module identifies that figure 10 provides a detailed plan for determining the competitive market when using the award term concept. The second module asks are there market advantages or disadvantages when using award term incentive. The third module identifies that using the award term incentive increases the strength of the competition. Because of the potential for earning a continuing business relationship, the interviewees in all five cases indicate that competition was increased. For example, teams of suppliers competed for the award in all five cases in order to gain competitive advantages of the skills of the combined team. The literature of Ellram asserts that partnerships will be a source of competitive advantage in most industries (Ellram, 1991).

The fourth module identifies that an advantage to implementing the award term incentive is reducing the potential for suppliers to buy-in. All five cases believe the pricing or NTE pricing of the award terms reduces the potential of a buy -in. The literature of Heberling and Graham supports findings that by pricing the follow-on effort at award of the initial contract reduces buy-ins (Heberling and Graham 1993).

The fifth module identifies that an advantage to implementing the award term incentive is reducing the suppliers' future bid and proposal cost. Further, potential source

selection cost and time savings are forecasted for both the government and the supplier. This is supported by the transaction cost literature reviewed in Chapter II (Center for Strategies and International Studies, 1993 and Templin, 1994).

The sixth module identifies that using the award term incentive decreases the strength of the competition. After losing a competition with an award term incentive, suppliers may abandon the DOD market. Suppliers may come to believe that the loss of a long-term contract essentially shuts them out of this market. "The consequent reduction in competitive vigor in the market could lead to higher prices or costs for services, or to poorer quality performance" (NCMA, 2000: 2-4).

The seventh module identifies that using the award term incentive increases the supplier's technical and financial risk. Commercial suppliers are guaranteed a revenue stream, which encourages capital investment. Appropriation law does not allow the government to guarantee revenue streams. Except for Case E where the public offeror is the supplier, suppliers have increased financial risk. Increased supplier technical risk to maintain concurrency or technical order changes was found in all the cases. All the cases identify the nature of the longer-term relationship also increases technical and financial risk on the supplier.

The eighth module identifies the DOD legal and regulatory environment as a disadvantage that decreases the strength of the competition. Gansler finds that the invisible hand of the market may not work for even the most standard commercial items. Some competitors can not be bothered with the red tape imposed by the regulations (Gansler, 1989). Templin finds there are transaction cost associated with proposal preparation and with source selection activities, which increase significantly as the

number of unique requirements increase (Templin, 1994). Transaction cost increase for the suppliers to DOD contracts because of the vast number of unique acquisition laws and regulations. An example from the cases is the OCI clause in Case C. Research found the OCI clause caused potential offerors not to propose because it would limit future simulation services opportunities.

The ninth module identifies that the increase in the initial bid and proposal cost and the additional cost and time to support the DOD source selection process decreases the strength of the competition. One comparison from the literature found it is five times more expensive to propose on defense solicitations than commercial invitations (Center for Strategies and International Studies, 1993). Case E reports that several potential suppliers chose not to propose or to join a team of suppliers because of the large cost of proposing.

The AFMC guidance states, "determining when and how to apply award term requires a thorough understanding of the market and the acquisition situation," (AFMC, 2000: 7). The results of this research identifies several questions to help acquisition professional define the DOD competitive market. Module 10 asks if there is a commercial market for the capability. Module 14 asks if the capability is a commercial type. Modules 11, 15, and 18 ask if there are high entry barriers to the market. An entry barrier is an action or condition that prevents other firms from entering the market. Depending on the answers to these questions, modules 12, 13, 16, 17, 19, and 20 identify the expected number of suppliers in the market, the expected sizes of the supplier firms, and the expected suppliers' past DOD experience.

If the capability to be acquired is commercially available with low entry barriers then the acquisition professional should expect a larger number of suppliers, consisting of large or small businesses, and DOD or Non-DOD suppliers. The described market conditions in module 12 exist for Case C. Although, Case C had a few government unique aspects, the network technology is commercially available with low entry barriers.

If the capability to be acquired is commercially available with high entry barriers then acquisition professionals should expect a smaller number of suppliers, consisting of large businesses, and DOD or Non-DOD suppliers. Market conditions described in module 13 are the market conditions for Case E. Case E had a few government unique aspects, the engine maintenance technology is commercially available with high entry barriers. The entry barriers include a skillful and knowledgeable workforce, license maintainer by the original equipment manufacturer, and facilities and equipment acquisition.

If the capability to be acquired is not commercially available, is of a commercial type, and has low entry barriers then acquisition professionals should expect a large number of suppliers. However, the number of suppliers would be less than that of suppliers whose capabilities have a commercial market. The expected market consists of large or small businesses, and DOD or Non-DOD suppliers. This is the market condition for module 16.

If the capability to be acquired is not commercially available, is of a commercial type and has high entry barriers then acquisition professionals should expect a small number of suppliers. The expected market consists of large businesses, and DOD or Non-DOD suppliers. The market conditions described in module 17 are the market

conditions for Cases A and D. Case A's and D's technology is for pilot training services is commercially available for government unique application with high entry barriers. The entry barriers include government controlled simulation certification and high initial capital investment.

If the capability to be acquired is not commercially available, is not of a commercial type, and has low entry barriers then acquisition professionals should expect a small number of suppliers. However, the number of supplier would be less than those of suppliers whose capabilities have a commercial market or are of a commercial type. The expected market consists of large or small businesses, and DOD suppliers. The describe market conditions describe in module 19 are the market conditions for Case B. Although the capability was determined to be of a commercial type, the current contracting officer could not understand how this was determined. There is not a commercial market for this type of mission crew training or a known type of commercial mission crew training service. Case B is a government mission crew simulation service. While pilot simulation technology is commercially available, there is no commercial equivalent mission crew training. The entry barriers were low. The initial capital investment is lower than pilot simulation services and does not require flight-worthy simulation certification. However, the government unique capability requires knowledge of the aircraft platform.

If the capability to be acquired is not commercially available, is not of a commercial type, and has high entry barriers then acquisition professionals should expect a small number of suppliers. The expected market consists of large businesses, DOD suppliers. This is the market condition for module 20. Module 21 directs the viewer

back to block 11 of the master flow chart. The remaining modules of the master flow chart are as previously described.

Summary

This chapter presented an overview of the data collected and analyzed, briefly introduced the within case analysis, and presented the between case analysis with an emergent model. The majority of this chapter was devoted to the presentation of the analytical model developed from this research and to the comparative analysis of the model. Chapter V presents the significant conclusions drawn from this analysis, the limitations of this research, and recommendations for future research.

V. Conclusions and Recommendations

This research was undertaken in response to the problem statement that there is no FAR coverage or DOD guidance for establishing the award term incentive and the commercial model does not address DOD unique factors. The purpose of this research was to identify and examine the nature of the factors for establishing and implementing the award term incentive strategy in DOD suppler relationships. Further, the objective of this research was to develop an award term incentive model to assist DOD acquisition professionals in formulating strategic purchasing relationships.

The framework for the case studies was developed around four research questions that were derived from a review of the strategic purchasing literature. The analytical model developed from this research is consistent with the AFMC guide. Further, the analytical model expands the guidance of the AFMC guide. It is clear from the anecdotal, archival, and literature evidence that guidance is needed for effective and efficient implementation of the award term, performance-based strategy.

Strategic Purchasing Conclusions

Implementation of best commercial practices is streamlining the DOD procurement process. However, it is necessary to recognize that development and execution of a strategic purchasing relationship is more labor intensive than arms-length transaction relationships. It is apparent from a review of the literature and from the study of the cases that top management and the acquisition corps needs a greater understanding of strategic purchasing relationships in order to implement the award term incentive judiciously.

Nature of the Capability. The type of capability being acquired is different from DOD's past acquisitions. The DOD is buying capabilities that are core competencies or near core competencies for achieving mission critical activities. The Government is purchasing these capabilities in the form of performance-based services. We no longer own the assets or own the facilities and equipment in support of the assets. The capabilities researched are of an on-going competitive nature. The capabilities are of a commercial type as defined by FASA or are available commercially to varying degrees. These capabilities provide access to risk reducing, leading edge technologies. The capabilities are of a high dollar value, where the additional cost of the relationship is offset by the value of the benefits.

Acquisition Corps' Capabilities. Mr. Gansler identifies performance-based service acquisition as the fastest growing method of procurement in the DOD and as one of his highest priorities. However, identifying the strategic purchasing skills or implementing a strategic purchasing skills development program to accomplish these types of acquisitions has not previously occurred. The literature and this research identify that the skills of the purchasing function must be congruent with the strategies of the organization.

The past structure of the acquisition workforce within AFMC has resulted in specialization of procurement skills for systems and subsystems supplies. This segment of the workforce does not have the necessary experience and training in service procurements, in order contracting procedures, or in commercial acquisition processes to effectively and efficiently implement the related award term incentive contracting tool. Further, implementation and administration of the contractual relationship using the

award term incentive tool is impacted by the DOD's base closure and downsizing efforts. This research identifies that IPT instability results in a loss of efficiency and of effectiveness within the acquisition corps.

Legal and Regulatory Environment. The entire DOD acquisition process is still under going changes to identify, capture, and implement best commercial practices to manage our supply chain. The award term concept is not covered by regulation and has not been subject to litigation at this time. When implementing an award term incentive strategy, it is important for the team to consider the impact of government unique laws and regulations. This research results in a detailed plan for evaluating the controlling legal and regulatory authority with award term unique application.

The complex and dynamic nature of the legal and regulatory environment requires special attention in implementing the award term incentive. To avoid ADA violations, the acquisition professionals must understand appropriation law in selecting the contractual vehicle and clauses for an award term contract. Complying with CICA requires competitive pricing of potential award terms or a J&A for sole source pricing. The current interpretation of the SCA does not limit award terms to five years. The acquisition corps must remain current with implications of changes in laws and regulations. For example, a Federal Circuit Court of Appeals has ruled that no contract term or condition may limit a suppliers access to the disputes process. Therefore, the award term clause cannot exempt an award term decision from the disputes process.

Nature of the DOD Competitive Market. Implementation of the award term incentive strategy affects the nature of the DOD market. Advantages of implementing this strategic purchasing method includes: increasing the strength of the competition,

reducing the potential for supplier buy-in, reducing supplier future bid and proposal cost, and reducing future source selection cost and time. Disadvantages of implementing this strategic purchasing method includes: decreasing the strength of future competition, increasing supplier financial and technical risk, limiting competition from the DOD legal and regulatory environment, increasing the instant procurement bid and proposal cost, and increasing the instant source selection cost and time.

This research results in a detailed plan for determining the competitive market. Although the supply or service may be commercially available or categorized as a commercial type, the government unique aspects of the supply or service influences the number, the size, and the type of company's willing to do business with the DOD. Government market entry barriers also influenced suppliers' competitiveness for DOD procurements.

Limitations

This research is limited by the exploratory nature of the subject area. Prior to this research, there were only commercial models describing the planning and the implementation process for strategic purchasing. The data available for identifying and examining the nature of the factors for establishing and implementing the award term incentive strategy in DOD suppler relationships was confined to Air Force AFMC programs and personnel. Unfortunately, these data sources limit the validity of the research.

The research is limited in that it does not represent the full scope of the participants in the award term process. Interview data from suppliers may be forthcoming as the execution of the award term incentive strategy gains acceptance.

Expanded data sources would increase the validity of this research. Further, examining data from only one Air Force Command limits the ability to generalize the conclusions of this research to other Air Force Commands and to other military services.

A single researcher conducted these case studies. Potential for researcher bias exists. Evaluation of these cases by another researcher using the same protocol would increase the reliability of the conclusions drawn from the findings.

Recommendations for Future Research

A goal of this exploratory research was to develop a model for acquisition professionals to use in the planning and the implementation of the award term strategic purchasing tool. The resulting model should be submitted to AFMC in hopes of eliciting comments to improve the model for incorporation into the AFMC Award Term Guide. Further, the results of this exploratory study should be submitted to the NCMA to share this body of knowledge with the contracting community. This study provides a foundation for expanding the NCMA Award Term Contracting seminar to include a discussion of strategic purchasing, of the acquisition corps' capability needs, and of the DOD competitive environment.

The limitations previously discussed provide several recommendations for future research. Future research should include a validation of the preliminary findings of this research. This could include an analysis of the same cases and protocol used in this research effort. Other future research could include an analysis of these cases with an expansion to include other cases from other military services to increase the ability to generalize the findings.

Related research areas not addressed by this research effort include: identifying methods for determining the value of the strategic purchasing relationship, identifying methods for evaluating award term in source selection, and identifying the factors for executing the award term evaluation process. Researching methods for determining the value of the strategic purchasing relationship includes the identification of the cost and benefit factors. This research would develop a mathematical model for use in the cost/benefit analysis determination.

Currently, source selection procedures do not provide for the dollarization of the probability of the contract being extended by the award term incentive. The award term periods are evaluated with the assumption that all award terms priced will be earned. This research would develop a mathematical model for use in the source selection decision. However, this potential research would have to include an examination of the controlling laws and regulations.

The AFMC Award Term Guide provides excellent instruction for the development of award term plans and for the execution of the supplier performance evaluation process. While intuitively appealing, the actual effectiveness of previously implemented contractual incentives such as award fee is anecdotal. Future research should include an empirical study of the effectiveness of the award term incentive.

Appendix A: First Telephone Contact with Primary Point Of Contact

Introduction

Rachael Harris
Master student at AFIT
Also a Contracting Officer at ASC Wright Patterson AFB

First Conversation

...this is regarding research I'm conducting on the award term incentive

"If you have the time now, I'd like to tell you a little more about my research. Would you be willing to allow me to visit your office (or schedule a time), talk with you and some of your colleges, and use the information as part of my master research?"

I got your name and number from Maj Vincent Feck of AFMC/PKP. He indicated you are working with a contract that has an award term incentive.

About the Research

This research is to identify how to establish a long-term relationship using the newest performance base strategy. I would like to compare your experience using award term with other acquisition professionals.

Research Objective

Identify and examine the nature of the factors in DOD for implementing this strategic relationship. From this information, I hope to develop a model to assist others using the award term concept.

What I Require

I will e-mail you an interview guideline that will include the questions and the interview process.

1. Meet with you and your colleges to review your contract files for strategy and award term documents.
2. Background on the program and the acquisition professionals using the award term.
3. Nature of the capability you are procuring
4. What the competitive market was for your program
5. How you are applying the laws and regulations
6. What kind of turnover rate has the team experienced

I expect that we'll spend a few hours talking, followed by me reading documents or reviewing my notes. Please set aside time for any follow-up questions.

Particulars

Date and time of visit or teleconference

Thank you so much for you help.

Appendix B: Interview Guidelines

Background Information

Name_____

Organization_____

Job Title_____

Years in Position_____

Years in Organization_____

Years in Acquisition_____

Interview Questions

The following questions provide information the researcher sought through the interview.

1. What is the capability or function that is being procured using award term incentives?
2. Is the item unique to DOD?
3. What are the risk and criticality of the capability or function?
4. Is this function being outsourced? If yes, is this function considered a near core competency and why is it being outsourced?
5. What contract type was used and why?
6. How does the Competition in Contracting Act (CICA) at 41 U.S.C. 253 and FAR subpart 6 affect the solicitation, selection, and management of the award term incentive process? CICA requires contracting officers to promote and to provide for full and open competition in soliciting offers and awarding public contracts.
7. How does the Service Contract Act at (4) U.S.C. 353 (d) which provides that contracts that are subject to the Act may not exceed 5 years affect the solicitation, selection, and management of the award term incentive?

8. How does the Anti-deficiency Act affect the solicitation, selection, and management of the award term incentive process? Specifically, what is the affect of Government unique appropriations, authorizations, and funding limitations?

9. How does the Truth-in-Negotiations Act affect the solicitation, selection, and management of the award term incentive process?

10. What other laws or regulations that affect the solicitation, selection, and management of the award term incentive process?

11. Were any unique terms and conditions incorporated in the contract? If yes, what and why?

12. What characterized the market for this acquisition?

13. Did the supplier operate in a competitive market?

14. Did the supplier have a competitive edge?

15. Does the solicitation or the contract contain organizational conflict of interest provisions? If yes, why was it necessary? Did it affect the competitive market?

16. Was there a potential for a buy-in?

17. What steps, if any, were taken to prevent a buy-in?

18. What role did the participant play in the case?

19. How long has the participant served in the current position?

20. How much experience does the participant have in related areas?

21. Has the participant used an award term incentive before?

22. How often are team members transferred?

23. Has the Term Determination Official changed since award of the contract?

24. Has the participate received or provided award term incentive training?

Method of Data Collection

In addition to discussions with acquisition team members , I will review whatever documentation you can provide such as the acquisition plan, solicitation, award term incentive contract provision, award term performance evaluation plan, and buyer/supplier correspondence.

I will set aside two mornings (0800-1200) for the face-to-face or telephone interview. After the initial discussion, I will review whatever written materials you can provide. Follow on discussions will address questions that may arise from this review.

For the validity and reliability of this research, I must address all the above questions. However, discussions will be allowed to take their natural course according to the availability of respondents, information, and documentation.

Follow-up

It will likely be necessary for me to make follow-up calls to respondents to clarify information during the data analysis process. To ensure accuracy on the part of the researcher, once the case is written-up it will be sent to the respondents for review prior to publication.

Appendix C: Pattern Codes

Table 4

PATTERN CODES	RES QUES	OPERATIONAL DEFINITIONS
Core	1	Core or Near Core for Critical Mission or Commodity
Value	1,3	High Cost Benefit Tradeoff for Value of Contract
CC	1,3	Changing Concurrency
CT	1,3	Changing Technology
CTO	1,3	Changing Technical Orders
ROAsset	1	Replaces owning asset
Sub Asset	1	Substitute for owned asset
ROFE	1	Replaces Owning Facility and Equipment
Ser	1,2,4	Service
Comm	1,2,3,4	Commercial
Uniq	1,2,3	Govt Unique Requirement
Comp	1,2,3	Competitive
SCA	2,4	Services Contract Act
FAR 12	2,4	Federal Acquisition Regulation Part 12 Acquisition of Commercial Items
FAR 15	2,4	Federal Acquisition Regulation Part 15 Contracting by Negotiation
Mult-KT	2,3,4	Multiple Contract Types
Lim-KT	2,3,4	Limited Contract Types (Firm Fixed Price or FFP with EPA)
NTEP	2,4	Not To Exceed Pricing
EP	2	Established Pricing
TINA	2	Truth In Negotiations Act
CICA	2,4	Competition in Contracting Act
CJ&A	2,4	Class Justification and Approval
OCI	2,3	Organizational Conflict of Interest
T for C	2	Termination for Convenience
ADA	2,4	Anti-Deficiency Act
A-Fund	2,4	Availability of Funds Clause
A-Appro	2,4	Annual Appropriation
ID/Req	2,4	Indefinite Delivery Requirements Contractual Vehicle
ID/IQ	2,4	Indefinite Delivery/Indefinite Quantity Contractual Vehicle
SBA	2	Small Business Administration
PPC	2	Public Private Competition
SB/SDB Plan	2	Small Business and Small Disadvantage Business Plan
Dis-A	2,4	Disputes Act
UniqTC	2,4	Unique Terms and Conditions

Table 4 (Continued)

Cont-Bus	2,3,4	Potential for Continued Business
F-B&P	3	Reduced Future Bid and Proposal Cost
Fin-R	3	Financial Risk
Tech-R	3	Technical Risk
I-B&P	3	Increased Instant Bid and Proposal Cost
R-Buyin	3	Reduced Potential for Buy-in
Leg Reg	2,3	DOD Legal and Regulatory Environment
Sm#Sup	3	Small Number of Suppliers
Lg#Sup	3	Large Number of Suppliers
LgBus	3	Large Business
SmBus	3	Small Business
LgBusT	3	Team of Large Businesses
SmBusT	3	Team of Small Businesses
DODSup	3	DOD Supplier
PubSup	3	Public Supplier
ComBusB	3,4	Commercial Business Base
NcomMkt	3,4	No Commercial Market
HSC	3	High Start-up Cost
LKB	3	Labor Knowledge Barrier
DP	4	Downsizing Promotion
BC	4	Base Closure Personnel Moves
PR	4	Position Eliminated in Downsizing
CT	2,4	Commercial Acquisition Procedures Training
OT	2,4	Order Contract Training
ST	2,4	Services Contract Training
AT	2,4	Award Term Incentive Training
CE	2,4	Commercial Acquisition Procedures Experience
OE	2,4	Order Contract Experience
SE	2,4	Services Contract Experience
AE	2,4	Award Term Incentive Experience

Appendix D: Within Case Analysis

This appendix consists of the complete results of all five within case analysis. Each section addresses only the information gathered from that particular program. The within case analyses are addressed in no particular order of importance. The presentation of each of the within cases follows a uniform and set format. Each case is divided into a background section and into four focus sections. The background section provides general information about each program, the dollar value of the acquisition, the contract length, and the experience level of the contracting professionals. The four focus sections are Nature of the Capability Purchased, Legal and Regulatory Environment, Nature of the DOD Competitive Market, Acquisition Corps' Capabilities. These sections were developed from the four research questions. The information in the four focus sections was open-coded using concept/mind-mapping techniques (Novak, 1998:27 and Buzan & Buzan, 1994:139). A pictorial representation of the resulting map is presented for each within case analysis.

Case A

Background. This program is for the acquisition of simulation services where the supplier maintains ownership of the system. The supplier is responsible for maintaining system concurrency with the aircraft and for all logistics support of the system. During acquisition planning, the estimated cost of this program was $806 million. It was determined the benefits of the relationship exceeded the cost of implementing the relationship. This basic contract is for 7 years with 2 years lead-time to the commencement of the minimum of 5 years of simulation services. The contract

provides for 8 annual award term periods that can potentially be earned by the supplier for a potential contract length of 15 years. Previously earned award term periods may also be lost based on evaluated supplier performance. Assigned to the program for 2 years, the contracting officer for this case has 16 years of acquisition experience. Assigned to the program for 2 years, the contract negotiator for this case has 5 years on contracting experience. Case A's mind map is at figure 11.

Nature of the Capability. The pilot training simulation service is provided on an individual simulator and is linked locally to same aircraft type simulators. The service provides the capability to be linked long haul through a network provider to other same aircraft type simulators and to be linked long haul through a network provider to different aircraft type simulators. These services were determined to be of a commercial type and procured under FAR Part 12. However, there is no other customer for this service except DOD (FMS is not buying the service). This is because of the unique training required such as flying in formation, air to air tactical mission training, and evasive maneuvers. There does not currently exist tactical training except in the aircraft.

This simulation service reduces the risk associated with training in the aircraft. In fact, some training will be completed solely in the simulator because of the high risk of training the maneuvers in the aircraft. Part of this type of training was completed in the aircraft and some of the training requirements never existed before. Previously the government owned the trainers, now the simulation service is contracted out. The interviewees indicated that having trained pilots to fly missions is near the AF core capability to perform the mission.

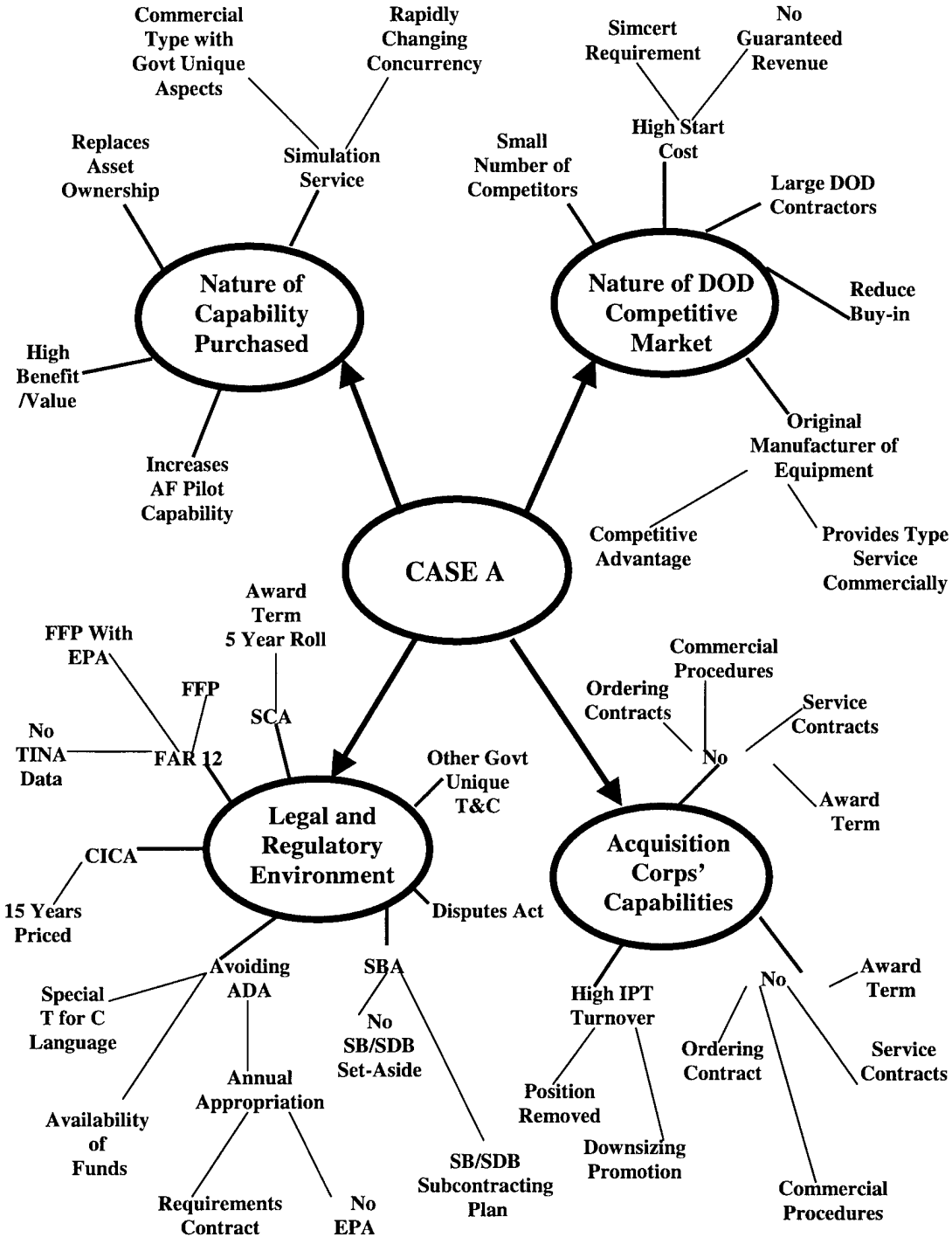

Figure 11: Case A Open Coded Mind Map

The suppliers have the technical expertise to provide the pilot training. By removing the government from the process, the supplier can implement concurrency upgrades much faster as the manpower is no longer available to manage this activity. Further, development and procurement money is not available to meet the new requirement.

Legal and Regulatory Environment. The service for Case A was determined to be of a commercial type. This determination in turn induced the use of FAR part 12 acquisition procedures. FAR 12 requires agencies to use (FFP) contracts or fixed-price contracts with economic price adjustment (EPA) for the acquisition of commercial items. Use of any other contract type to acquire commercial items is prohibited by this regulation. A FFP type contract was awarded using an indefinite delivery requirements contractual vehicle.

The budget is very limited for this program. To avoid violating the Anti-deficiency Act (ADA), the contracting officer decided not to use an EPA. Even if the service had not been a commercial type, the use of annual 3400 appropriations makes it too risky for the government to award any cost type contract. Further, the nature of a requirements contract imposes no obligation on the Government to order any services. The basis of consideration for contract formation is the government's promise to acquire these services only from the awarded supplier. An ADA violation as the result of a termination for convenience is avoided using contractual language limiting recover of cost only on orders issued and not on terms earned without orders issued. Further, the contract contains an availability of funds clause.

To comply with the Competition in Contracting Act, the IPT for Case A solicited, evaluated, and awarded priced services for all 15 years. The interviewees indicated that without firm pricing for the entire contract period of performance the same justification and approval needed to award a sole source contract would have to be secured before granting the award term extension.

The acquisition planning for this program includes the application of the Services Contract Act (SCA) which provides for wage adjustments and limits the contract to 5 years. Price adjustments will be made based on union negotiate rates for the technicians. The IPT is mechanically controlling the total length of the award term extensions that are on contract at any point in time. There will never be more than 5 years of performance on contract at anyone time. As years of performance are used up then more are added or subtracted base on evaluation of supplier performance. This was coordinated with the AFMC Department of Labor (DOL) Liaison Representative and the Secretary of the Air Force Staff Judge Advocate Generals (SAF/JAG) office.

As this was a competitive procurement that was conducted under FAR 12 no certified cost and pricing data or information other than cost and pricing data was required during source selection. At the time of award of this contract, the government was prohibited from requiring certified cost and pricing data under the Truth in Negotiation Act for commercial items. However, in Case A no commercial market pricing data was available for this service. When pricing contract modifications for this service, it is difficult for the contracting officer to determine if the price is fair and reasonable. Because of the potential longer relationship afforded under the award term

provision, the supplier has voluntarily provided other than cost and pricing data as well as catalogue data if available to help support the changes process.

Another regulation that affected this government acquisition included consideration of the small business requirements. The regulations required the IPT to gain approval from the Small Business Administration not to set-aside the competition to small or small disadvantaged businesses. Further, small business/small disadvantage business subcontracting plans were required to be submitted, evaluated, and administered.

The contract awarded contains several special clauses or government unique terms and conditions. The most notable special clause is an award term clause allowing extensions or reductions to the performance period not subject to the Disputes Act. Second, a special deliveries and performance clause allowing technical insertion upgrades. Lastly, a system availability accounting clause allowing assignment of award term points for mean time between failure and the device availability rates that feeds into the performance evaluation of the award term for system availability. To win the award the supplier had to agree to the inclusion of the following government unique contract terms and conditions for commercial items under FAR 52.212-4(r)—

1. comply with 31 U.S.C. 1352 relating to limitations on the use of appropriated funds to influence certain Federal contracts;
2. 18 U.S.C. 431 relating to officials not to benefit;
3. 40 U.S.C. 327, *et seq.*, Contract Work Hours and Safety Standards Act;
4. 41 U.S.C. 51-58, Anti-Kickback Act of 1986;
5. 41 U.S.C. 265 and 10 U.S.C. 2409 relating to whistleblower protections;
6. 49 U.S.C. 40118, Fly American; and
7. 41 U.S.C. 423 relating to procurement integrity.

Nature of the DOD Competitive Market. Pilot simulation training service for commercial airlines can be acquired on an hourly basis. The number of suppliers of pilot training in the commercial market is small because of the FAA certification and annual re-certification requirements. The SAMP identifies there are several offerors interested in this competition. The number of suppliers for the simulation service acquired under Case A contained a few of the large DOD contractors. The AF certifies AF owned devices for training. The AF will remain the certification authority for the simulators that will provide the service acquired for Case A.

There are high start-up costs to enter this market. The supplier must develop, integrate interoperability requirements, and produce the devices. The devices must be tested and certified before an order for the service is issued. Commercial suppliers are guaranteed a revenue stream for the simulation service. Appropriation law does not allow us this latitude. The interviewee indicated the supplier is at a tremendous financial risk.

The supplier in Case A did have a competitive edge because they are the producer of the aircraft and have produced this type of simulator in the past. As the producer of the aircraft, the supplier will be able to maintain concurrency with the aircraft easier than another supplier could.

Shifting the risk of concurrency responsibility to the supplier reduces the potential for buy-in. In the past, suppliers have been able to recoup cost through government requested change order modifications. Further, pricing the award term extensions reduces the potential for buy-in. Previously, suppliers have been able to get well from follow-on procurements.

Acquisition Corps' Capabilities. The interviewees were the previous contract negotiator and the current contracting officer/contract negotiator for Case A. The previous contract negotiator participated on the program for three years and had no prior experience buying services, using commercial procedures, or using ordering contracts. The current contracting officer/contract negotiator has been working the program for eight months and had no prior experience buying services, using commercial procedures, or using ordering contracts. As the award term incentive concept is new, neither of these participates have any experience using award term.

The core government IPT for Case A has experience extreme instability. In the four years since the start of acquisition planning, this program has had four different contracting officers, four different program managers, two different buyers, and one engineer. Since award of the contract, the Term Determining Official (TDO) for the award term has changed twice. It was indicated that downsizing required some IPT members to move to other inadequately staffed programs. Some IPT members left the program due to promotions into open positions left vacant from early retirements.

The interviewees have not received or conducted training for the award term concept and related acquisition concepts other than the award term plan for the contract. Each of the TDO changes requires training of duties and responsibilities concerning the award term process. The Award Term Review Board (ATRB) members are assumed to understand the award term process, as they are familiar with the award fee process.

Case B

Background. This program is for the acquisition of mission crew simulation services where the supplier maintains ownership of the system. The supplier is responsible for maintaining system concurrency with the aircraft and for all logistics support of the system. At the time of acquisition planning, the estimated cost of this program was $131.9 million. It was determined the benefits of the relationship exceeded the cost of implementing the relationship. The basic contract is for 7 years with 8 annual award term periods that can potentially be earned by the supplier for a total of 15 years. Based on evaluated performance, the supplier can lose up to 2 years, of the original 7 years, for a minimum of 5 years. Previously earned award term periods may also be lost based on evaluated supplier performance. Assigned to the program for 1 month, the contracting officer for this case has 15 years of acquisition experience. Assigned to the program for 2 years, the previous contracting officer for this case had 15 years of acquisition experience. Case B's mind map is at figure 12.

Nature of the Capability. Mission crew simulation services are provided for multiple sites with a minimum of 14 crew stations and 7 instructor operator stations at each site. The service provides the capability to be linked long haul through a network provider to different aircraft type simulators. These services were determined to be of a commercial type and procured under FAR Part 12. However, there is not a commercial market for this type of mission training or a known type of commercial mission crew training service.

The AF has identified the need for other aircraft mission crews to train with pilots from other aircraft. The AF mission has been negatively impacted due to a lack of

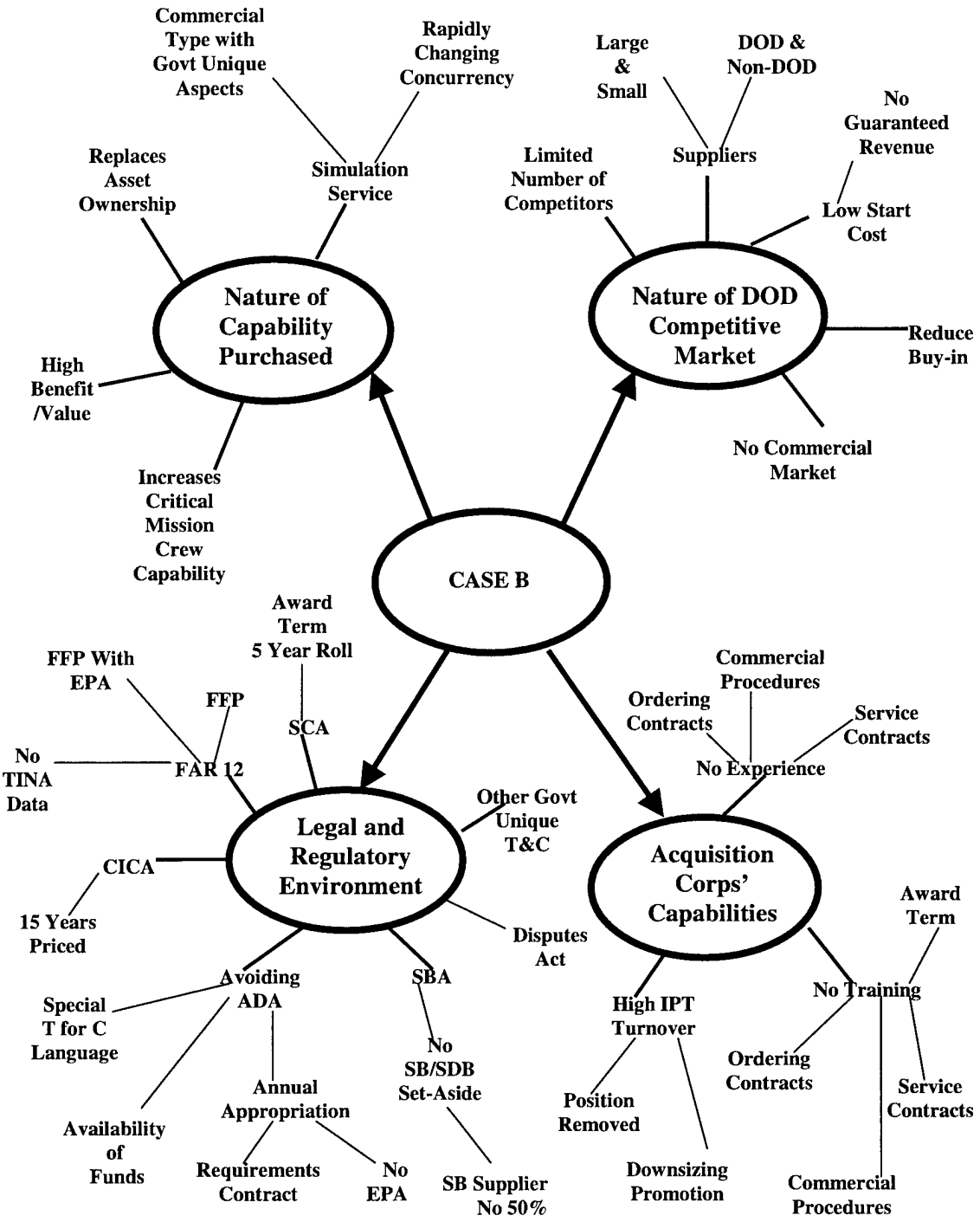

Figure 12: Case B Open Coded Mind Map

composite or inter-aircraft training. This type of training fits with in the concept of an Expeditionary Air Force (EAF). The interviewees indicated that having this training service is very near the core competency of conducting the AF mission.

In the past, the government owned the simulators. There have been serious delays in acquiring concurrency upgrades due to budget cuts in development and procurement money. Now the supplier will own, operate, and upgrade concurrency as needed.

Legal and Regulatory Environment. The service for Case B was determined to be of a commercial type. This determination in turn induced the use of FAR part 12 acquisition procedures. Part 12 of the FAR requires agencies to use FFP contracts or fixed-price contracts with EPA for the acquisition of commercial items. Use of any other contract type to acquire commercial items is prohibited by this regulation. A FFP type contract was awarded using an indefinite delivery requirements contractual vehicle.

The budget is very limited for this program. To avoid violating the ADA, the contracting officer decided not to use an EPA. Even if the service had not been a commercial type, the use of annual 3400 appropriations makes it too risky for the government to award any cost type contract. Placement of annual orders using annual appropriation helps avoid ADA violations. Further, the nature of a requirements contract imposes no obligation on the Government to order any services, which avoids funding limitation problems. The basis of consideration for contract formation is the government's promise to acquire these services only from the awarded supplier. An ADA violation as the result of a termination for convenience is avoided using contractual language limiting recover of cost only on orders issued and not on terms earned without orders issued. Further, the contract contains an availability of funds clause.

The price and service performance requirements were compete for all 15 years to comply with CICA. The ceiling amount of the contract includes the entire 15 years. The interviewee indicated that without firm pricing for the entire contract period of performance the same justification and approval needed to award a sole source contract would have to be secured before granting the award term extension.

The first contracting officer incorporated the SCA into this contract. The award of extensions is manually limited to no more than five years at any point in time to avoid violating the SCA five-year limitation on the length of the contract. However, the current contracting officers understanding is that the SCA does not limit the length of the contract to five years. This understanding is based on the DOL interpretation of extensions to service contracts. The interviewee provided the DOL interpretation as follows:

> Also, whenever the term of an exiting contract is extended, pursuant to an option clause or otherwise (e.g. award term provision), so that the contractor furnishes the services over and extended period of time, ra ther than being granted extra time to fulfill his original commitment, the extension is considered to be a new contract for purposes of the application of the Act's provisions. (DOL, 1983: 4.143)

As this was a competitive procurement that was conducted under FAR 12 no certified cost and pricing data or information other than cost and pricing data was required during source selection. At the time of award of this contract, the government was prohibited from requiring certified cost and pricing data under TINA for commercial items. However, in Case B no commercial market pricing data was available for this service. When pricing contract modifications for this service, it is difficult for the contracting officer to determine if the price is fair and reasonable. Because of the

potential longer relationship afforded under the award term provision, the buyer and supplier negotiated an agreement for the supplier to submit information other than cost or pricing data for within scope modifications. The amount of data the supplier provides is dependent on the type of change.

Another regulation that affected this government acquisition included consideration of the small business requirements. The regulations required the IPT to gain approval from the Small Business Administration not to set-aside the competition to small or small disadvantaged businesses. Further, small business/small disadvantage business subcontracting plans were required to be submitted and evaluated for non-small business offerors. Because a small business won this competition, the contract does not contain a subcontracting plan. As this was not a set-aside, this small business supplier does not have to comply with FAR 52.219-14, which would have require the small business supplier to perform more than 50% of the effort.

The contract awarded contains several special clauses or government unique terms and conditions. The most notable special clause is an award term clause allowing extensions or reductions to the performance period not subject to the Disputes Act. Second, a special deliveries and performance clause allowing technical insertion upgrades valued up to $50,000 for the first site and $25,000 for all remaining sites within the contract price. Lastly, a system availability accounting clause allows payments to be reduced if the system is not 99% available for simulation service. To win the award the supplier had to agree to the inclusion of the following government unique contract terms and conditions for commercial items under FAR 52.212-4(r)—

1. comply with 31 U.S.C. 1352 relating to limitations on the use of appropriated funds to influence certain Federal contracts;
2. 18 U.S.C. 431 relating to officials not to benefit;
3. 40 U.S.C. 327, *et seq.*, Contract Work Hours and Safety Standards Act;
4. 41 U.S.C. 51-58, Anti-Kickback Act of 1986;
5. 41 U.S.C. 265 and 10 U.S.C. 2409 relating to whistleblower protections;
6. 49 U.S.C. 40118, Fly American; and
7. 41 U.S.C. 423 relating to procurement integrity.

Nature of the DOD Competitive Market. Simulation type training services are available commercially. However, mission crew simulation service is not available commercially. There were a small number of supplier teams interested in providing the mission crew simulation service acquired under Case B.

There are high start-up costs to enter this market. The supplier must develop, integrate interoperability requirements, and produce the devices. The devices must be tested before an order for the service is issued. The interviewee indicated the supplier is at a tremendous financial risk. No potential supplier in Case B had a competitive edge.

Shifting the risk of concurrency responsibility to the supplier reduces the potential for buy-in. In the past, suppliers have been able to recoup cost through government requested change order modifications. Further, pricing the award term extensions reduces the potential for buy-in. Previously, suppliers have been able to get well from follow-on procurements.

Acquisition Corps' Capabilities. The interviewee is currently the contracting officer/contract negotiator and has participated on the program for one month but works the same office with as the prior contracting officer and contract negotiators. This participant has two years experience working with award term contracting on another procurement. Other related experience in buying services and using ordering contracts,

but no experience using commercial procedures. The interviewee indicated that training for commercial procedures was needed. Further, the training offered thus far has been inadequate because the experience base does not exist in the government. The trainers provided have not actually used the prescribed commercial procedures.

The core government IPT for Case B has experience extreme instability. In the two years since the start of acquisition, planning this program has had four different contracting officers, two different program managers, three different buyers, and two different engineers. Since award of the contract, the TDO for the award term has not changed. It was indicated that downsizing required some IPT members to move to other inadequately staffed programs. Some IPT members left the program due to promotions into open positions left vacant from early retirements.

The interviewee has provided award term incentive training to the TDO and to the supplier. The contracting officer knows the ATRB members are familiar with award fee process and believe they understand the award term process because of the similarities.

Case C

Background. This program is for the acquisition of network services. The supplier is responsible for providing the network service that links together distributed mission training to provide federates with the capability to conduct team training. The network service includes integration and interconnectivity services as well as daily operations and support. During acquisition planning, the estimated cost of this program was $449 million. It was determined the benefits of the relationship exceeded the cost of implementing the relationship. The basic contract is for 5 years with 11 annual award

term periods that can potentially be earned by the supplier. Based on evaluated performance, the supplier can lose up to 2 years, of the original 5 years, for a minimum of 3 years. Previously earned award term periods may also be lost based on evaluated supplier performance. Assigned to the program for 2 years, the contracting officer for this case has 15 years of acquisition experience. Assigned to the program for 3 years, the contract negotiator for this case has 5 years of contracting experience. Case C's mind map is at figure 13

Nature of the Capability. This network service includes a research and development effort for related areas like multi-level security. The supplier establishes the standards and tools so those dissimilar platforms can train together. This type of network service provides interoperability between different aircraft type of simulators. This capability provides a network to connect simulators around the world for real-time distributed training. Network services are available commercially and are not unique to DOD. The interoperability requirement could not be clearly determined to be of a commercial type, as the application is considered unique to DOD. The interoperability requirement and the research and development portion of the acquisition caused the team to use FAR part 15 procedures to select the supplier.

The cost of composite training is expensive and dangerous. The network service allows the interaction between different platform pilots and between pilots and mission crews. Previously we own the simulators with no network training capability. Now various suppliers will own, operate, and upgrade concurrency. The network service provides a new capability to train within the concept of EAF. The interviewees indicated

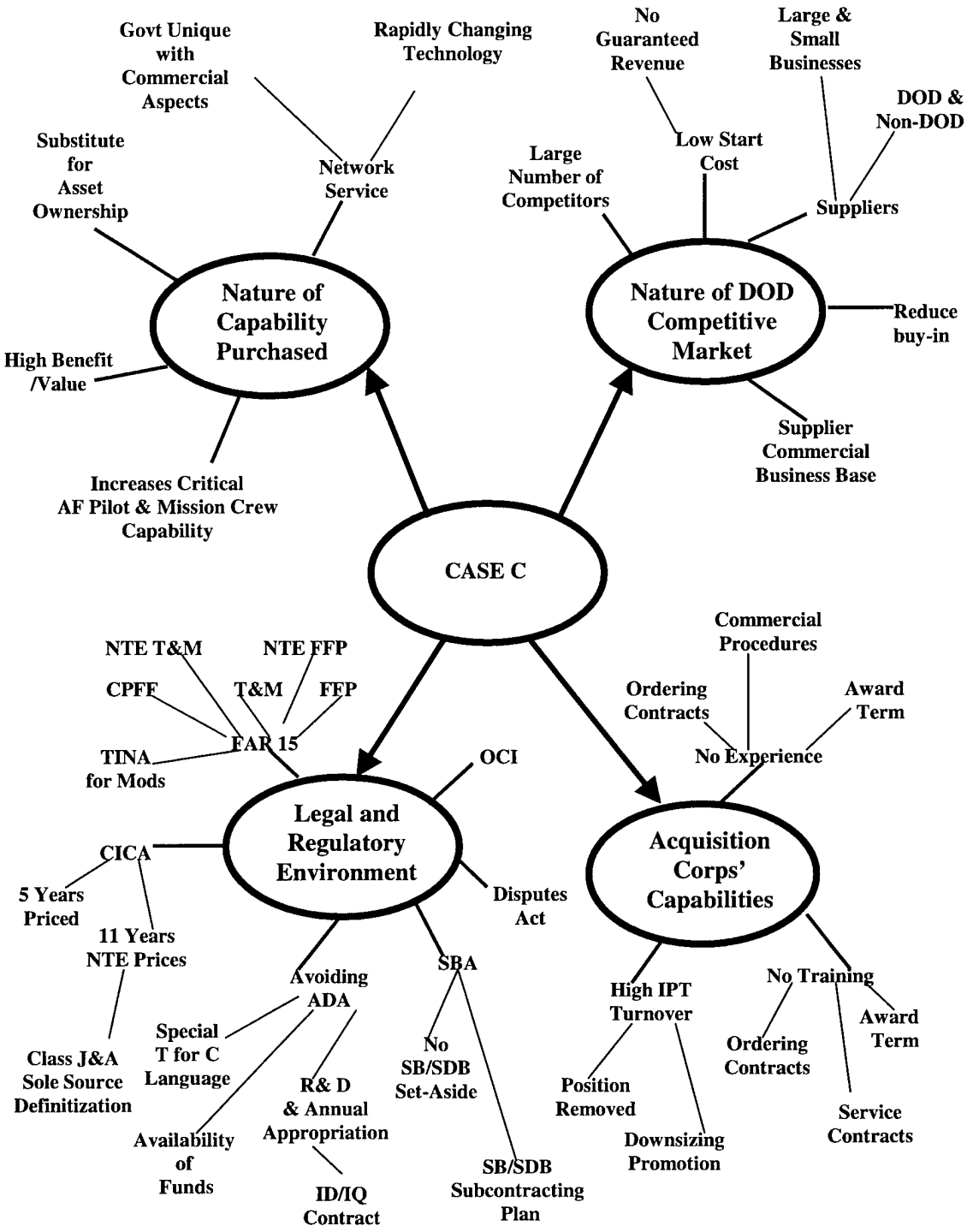

Figure 13: Case C Open Coded Mind Map

that having this network service is very near the core competency of conducting the AF mission.

Legal and Regulatory Environment. The service for Case C was determined to be unique to the government. This determination in turn induced the use of FAR part 15 acquisition procedures. Part 15 of the FAR allows the use of various types of fixed-price and cost reimbursement contracts. Using an indefinite delivery/indefinite quantity contractual vehicle, the contract awarded for Case C included FFP, not-to exceed (NTE) FFP for out year services, time and material (T&M), NTE T&M and cost-plus-fixed-fee (CPFF) type pricing arrangements.

The budget is very limited for this program. Placement of annual orders using annual appropriation for the network service will help avoid ADA violations. Further, the nature of an ordering contract imposes no obligation on the Government to order any effort beyond the required minimum guaranteed, which avoids funding limitation problems. The basis of consideration for contract formation is the government's placement of the minimum order. An ADA violation as the result of a termination for convenience is avoided using the ID/IQ contractual vehicle, which limits recovery to issued orders. Further, the contract contains an availability of funds clause.

To comply with CICA, the acquisition strategy for Case C featured full and open competition with a two-phase down select approach FAR 15 procedures. Multiple contracts were award. The successful down selected supplier's contract was modified to incorporate firm prices for the next five years of services (Phase II) and NTE prices for the additional 11 years of potential award term extensions. Because the award terms did not include competitively established prices, no extension can be awarded without

approval of a sole source award. The IPT for Case C is currently seeking approval of a class J&A to definitize the NTE prices from the Secretary of the Air Force Acquisition Executive. The class J&A is being requested under the authority of FAR 6.302–1 (a) (2)(iii) duplicated cost and unacceptable delay in effort highly specialized service. The interviewees indicated that without firm pricing for the entire contract period of performance the same justification and approval needed to award a sole source contract would have to be secured before granting the award term extension.

The SCA does not apply to this contract. The DOL does not may wage determinations for the professional labor required for this effort. The interviewees understanding of the DOL's interpretation of the SCA is that the contract length would not be limited to 5 years even if the SCA did apply.

Adequate competition allowed limited cost and pricing data to be requested during the source selection and the down select activities. TINA applies and the Government uses certified cost and pricing data for modifications and definitization of the NTE prices. Because technology is changing rapidly, the net cost will continue to decline. The NTE prices protected the government and the supplier from locking in firm prices too early. A maximum of five years into the future will be definitized. The award term plan evaluation incentivizes complete and accurate proposals through rating responsiveness to request for proposals.

Another regulation that affected this government acquisition included consideration of the small business requirements. The regulations required the IPT to gain approval from the Small Business Administration not to set-aside the competition to small or small disadvantaged businesses. A small business and small disadvantage

business comprehensive subcontracting plan is included in the contract for Case C. Further, the award term plan incentivizes the supplier to exceed socioeconomic program goals.

The contract awarded contains several special clauses or government unique terms and conditions. The most notable special clause is an award term clause allowing extensions or reductions to the performance period. Case E's award term clause does not exempt it from the Disputes Act. A down select clause allows the government to reduce the number of suppliers to a single source following the Phase 1 risk reduction effort. A special payment procedure similar to performance based payments allows annually priced connectivity to be paid monthly. The DOD requirement to use the Defense Information Service Network (DISN) as the network architecture has been deferred. The requirement will be reviewed after three years of network service at which time the supplier may be required to use the DISN network architecture to provide the connectivity service. A DISN clause allows the government to direct the supplier to provided the connectivity using DISN and allows the change to be negotiate using this clause as the authority. To win the award the supplier had to agree to the inclusion of the government unique organizational conflict of interest (OCI) clause. This clause is required because the supplier for Case C is establishing standards and defines the network interface requirements for the other suppliers of simulation services. Further, the network supplier can be a technical advisor in future simulation services source selections.

Nature of the DOD Competitive Market. A large commercial market exists for information technology and networking services. The SAMP identifies there are a large number of potential offerors interested in this competition. The market is characterized

by a large number of suppliers varying in size from large businesses to very small businesses.

The network market has few entry barriers and has relatively low start-up cost. The performance requirements for Case C are unique to the government and have not been previously procured. No potential supplier in Case C had a competitive edge. Full and open competition opportunities existed for the initial multiple awarded Phase 1 and for the down select single awarded Phase 2. However, the OCI clause caused potential offerors not to propose because it would limit future simulation services opportunities.

The interviewee indicated there was potential for offerors to buy-in for this service. Offerors attempted to move FFP and FFP NTE efforts to the T&M and NTE T&M and to the CPFF efforts in their proposed statements of work from the government statement of objectives. Numerous evaluation notices were issued and face-to-face discussions were conducted during source selection to counteract the buy-in attempts. Further, discussion were conducted at the Air Force base and at multiple suppliers' facilities during Phase 1 to ensure the task were proposed for Phase 2 under the correct contract line items. Further, the NTE pricing with downward only adjustments for the award term extensions reduces the potential for buy -in.

Acquisition Corps' Capabilities. The interviewees were the previous contract negotiator and the current contracting officer/contract negotiator for Case C. The previous contract negotiator participated on the program for three years and had no prior experience buying services, using commercial procedures, or using ordering contracts. The current contracting officer/contract negotiator has been working the program for the past three years and has experience in buying services and using ordering contracts, but

no experience using commercial procedures or using multiple contract types. As the award term incentive concept is new, neither of these participates had prior experience in its use.

The core government IPT for Case C has experience extreme instability. In the four years since the start of acquisition planning, this program has had two different contracting officers, four different program managers, and three different contract negotiators. The large staff of five engineers has remained stable. The TDO has not changes since the down select to a single supplier. It was indicated that downsizing required some IPT members to move to other inadequately staffed programs. Some IPT members left the program due to promotions into open positions left vacant from early retirements.

The interviewee has provided award term incentive training to the TDO and to the supplier. The contracting officer knows the ATRB members are familiar with award fee process and believe they understand the award term process because of the similarities.

Case D

Background. This program is for the acquisition of pilot simulation services where the supplier maintains ownership of the system. The supplier is responsible for maintaining system concurrency with the aircraft and for all logistics support of the system. At the time of acquisition planning, the estimated cost of this program was $605 million. It was determined the benefits of the relationship exceeded the cost of implementing the relationship. The basic contract is for 7 years with 8 annual award term periods that can potentially be earned by the supplier for a total of 15 years. Based on

evaluated performance, the supplier can lose up to 2 years, of the original 7 years, for a minimum of 5 years. Previously earned award term periods may also be lost based on evaluated supplier performance. Assigned to the program for 2 years, the contracting officer for this case has 16 years of acquisition experience. Case D's mind map is at figure 14.

Nature of the Capability. This program procures availability of pilot training simulation services. The simulation service is provided on an individual simulator and is linked locally to same aircraft type simulators. The service provides the capability to be linked long haul through a network provider to other same aircraft type simulators and to be linked long haul through a network provider to different aircraft type simulators. These services were determined to be of a commercial type and procured under FAR Part 12. DOD is currently the only customer of this service. However, there is a potential FMS market for this type of simulation service. This is because of the unique training required such as flying in formation, air to air tactical mission training, and evasive maneuvers. There does not currently exist tactical training except in the aircraft.

Procuring availability of simulation type training as a service reduces the risk associated with training in the aircraft. In fact, some training will be completed solely in the simulator because of the high risk of some training the maneuvers in the aircraft or of using destructive weapons. Some of the training used to be completed in the aircraft and some of the training requirements never existed before. Previously we own the trainers,

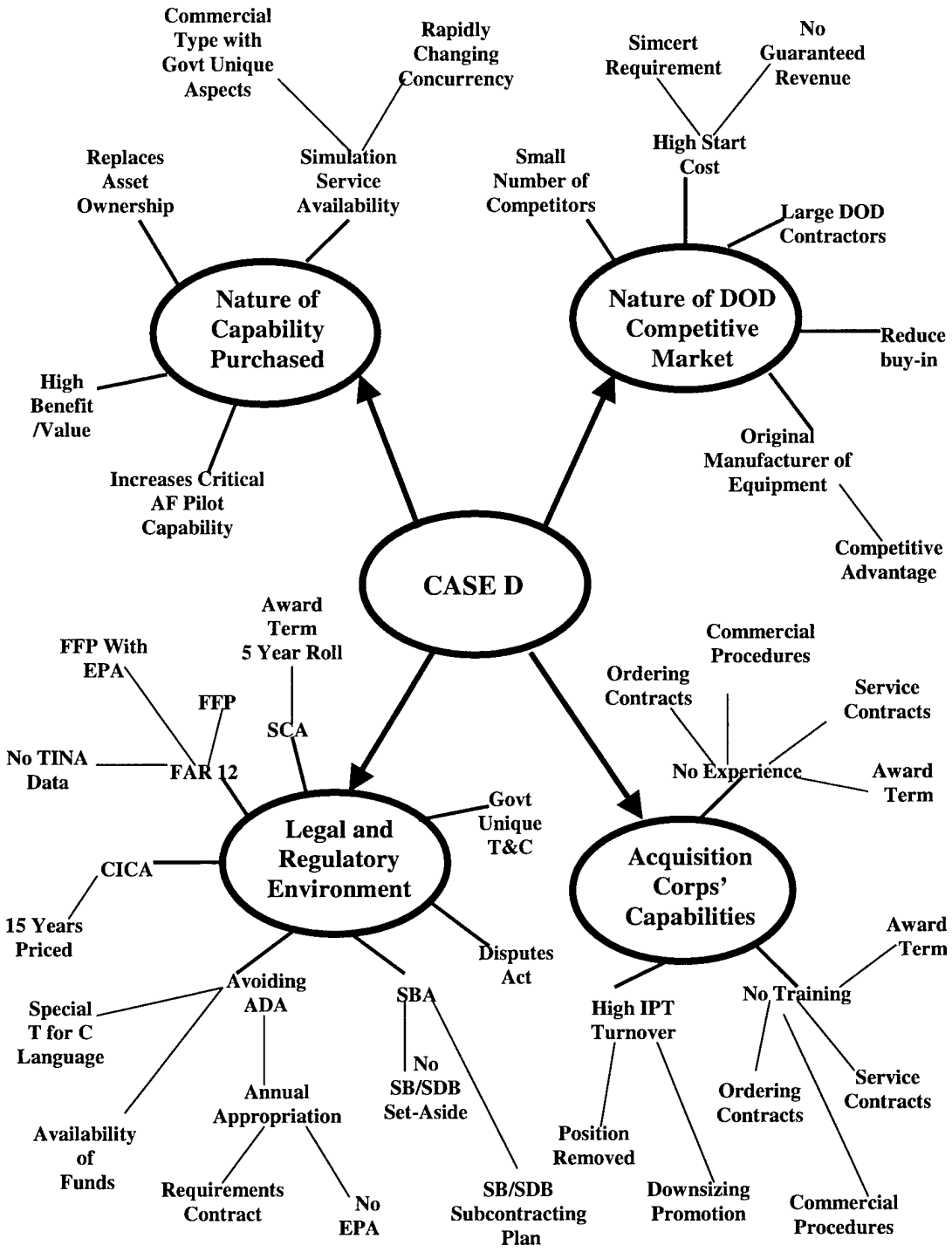

Figure 14: Case D Open Coded Mind

now we are contracting for the availability of the service. The interviewee indicated that having trained pilots to fly missions is near the AF core capability to perform the mission.

The suppliers have the technical expertise or can hire subject matter experts to provide the simulation service. By removing the Government from the process, the supplier can implement concurrency upgrades much faster as we no longer have the manpower. Further, there was no development and procurement money available to maintain concurrency or to meet the new interoperability training requirement.

Legal and Regulatory Environment. The service for Case D was determined to be of a commercial type. This determination in turn induced the use of FAR part 12 acquisition procedures. Part 12 of the FAR requires agencies to use FFP contracts or fixed-price contracts with EPA for the acquisition of commercial items. Use of any other contract type to acquire commercial items is prohibited by this regulation. A FFP type contract was awarded using an indefinite delivery requirements contractual vehicle.

The budget is very limited for this program. To avoid violating the ADA, the contracting officer decided not to use an EPA. Even if the service had not been a commercial type, the use of annual 3400 appropriations makes it too risky for the government to award any cost type contract. Placement of annual orders using annual appropriation helps avoid ADA violations. Further, the nature of a requirements contract imposes no obligation on the Government to order any services, which avoids funding limitation problems. The basis of consideration for contract formation is the government's promise to acquire these services only from the awarded supplier. An ADA violation as the result of a termination for convenience is avoided using contractual

language limiting recover of cost only on orders issued and not on terms earned without orders issued. Further, the contract contains an availability of funds clause.

To comply with CICA, the Case D synopsized and competed the service performance requirements for all 15 years. The ceiling amount of the contract includes the entire 15 years. The interviewee indicated that without firm pricing for the entire contract period of performance the same justification and approval needed to award a sole source contract would have to be secured before granting the award term extension.

The acquisition planning for this program includes the application of the SCA, which provides for wage adjustments and limits the contract to five years. Price adjustments will be made based on union negotiate rates for the technicians. The IPT is mechanically controlling the total length of the award term extensions that are on contract at any point in time. There will never be more than five years of performance on contract at anyone time. As years of performance are used up then more are added or subtracted base on evaluation of supplier performance. This was coordinated with the AFMC Department of Labor (DOL) Liaison Representative and the Secretary of the Air Force Staff Judge Advocate Generals (SAF/JAG) office.

As this was a competitive procurement that was conducted under FAR 12 no certified cost and pricing data or information other than cost and pricing data was required during source selection. At the time of award of this contract, the government was prohibited from requiring certified cost and pricing data under TINA for commercial items. However, in Case D no commercial market pricing data was available for this service. When pricing contract modifications for this service, it is difficult for the contracting officer to determine if the price is fair and reasonable. Because of the

potential longer relationship afforded under the award term provision, the supplier has voluntarily provided other than cost and pricing data as well as catalogue data if available to help support the changes process.

Another regulation that affected this government acquisition included consideration of the small business requirements. The regulations required the IPT to gain approval from the Small Business Administration not to set-aside the competition to small or small disadvantaged businesses. Further, small business/small disadvantage business subcontracting plans were required to be submitted, evaluated, and administered.

The contract awarded contains several special clauses or government unique terms and conditions. The most notable special clause is an award term clause allowing extensions or reductions to the performance period not subject to the Disputes Act. Second, a special deliveries and performance clause allowing technical insertion upgrades. Lastly, a system availability accounting clause allowing assignment of award term points for mean time between failure and the device availability rates that feeds into the performance evaluation of the award term for system availability. To win the award the supplier had to agree to the inclusion of the following government unique contract terms and conditions for commercial items under FAR 52.212-4(r)—

1. comply with 31 U.S.C. 1352 relating to limitations on the use of appropriated funds to influence certain Federal contracts;
2. 18 U.S.C. 431 relating to officials not to benefit;
3. 40 U.S.C. 327, *et seq.*, Contract Work Hours and Safety Standards Act;
4. 41 U.S.C. 51-58, Anti-Kickback Act of 1986;
5. 41 U.S.C. 265 and 10 U.S.C. 2409 relating to whistleblower protections;
6. 49 U.S.C. 40118, Fly American; and
7. 41 U.S.C. 423 relating to procurement integrity.

Nature of the DOD Competitive Market. Pilot simulation training service for commercial airlines can be acquired on an hourly basis. The number of suppliers of pilot training in the commercial market is small because of the FAA certification and annual re-certification requirements. The number of suppliers for the simulation service acquired under Case D contained a few of the large DOD contractors. The AF certifies AF owned devices for training. The AF will remain the certification authority for the simulators that will provide the service acquired for Case D.

There are high start-up costs to enter this market. The supplier must develop, integrate interoperability requirements, and produce the devices. The devices must be tested and certified before an order for the service is issued. Commercial suppliers are guaranteed a revenue stream for the simulation service. Appropriation law does not allow us this latitude. The interviewee indicated the supplier is at a tremendous financial risk.

The supplier in Case D did have a competitive edge because they are the producer of the aircraft and have produced this type of simulator in the past. As the producer of the aircraft, the supplier will be able to maintain concurrency with the aircraft easier than another supplier could.

Shifting the risk of concurrency responsibility to the supplier reduces the potential for buy-in. In the past, suppliers have been able to recoup cost through government requested change order modifications. Further, pricing the award term extensions reduces the potential for buy-in. Previously, suppliers have been able to get well from follow-on procurements.

Acquisition Corps' Capabilities. The interviewee was the contract negotiator before contract award and is currently the contracting officer/contract negotiator for Case

D. This participant has been working the program for two years and had no prior experience buying services, using commercial procedures, or using ordering contracts. The participant had no experience using award term, as this is a new concept.

The core government IPT for Case D experienced some instability. From the stare of the program two years ago, this program has had two different contracting officers, two different program managers, two different contract negotiators, and two different engineers. Since award of the contract, the Term Determining Official (TDO) for the award term has changed twice. It was indicated that downsizing required some IPT members to move to other inadequately staffed programs. Some IPT members left the program due to promotions into open positions left vacant from early retirements.

The interviewee has not received or conducted training for the award term concept and related acquisition concepts other than the award term plan for the contract. Each of the TDO changes requires training of duties and responsibilities concerning the award term process, but was provided by another IPT. The Award Term Review Board (ATRB) members are assumed to understand the award term process, as they are familiar with the award fee process.

Case E

Background. This program is for the acquisition of aircraft engine overhaul and repair services. The supplier is responsible for scheduled overhaul maintenance and for diagnoses and repair. At the time of contract award, the estimated cost of this program was $10 billion. It was determined the benefits of the relationship exceeded the cost of implementing the relationship. The basic contract is for 7 years with 8 annual award term

periods that can potentially be earned by the supplier for a total of 15 years. Based on evaluated performance, the supplier can lose up to 2 years, of the original 7 years, for a minimum of 5 years. Previously earned award term periods may also be lost based on evaluated supplier performance. Assigned to the program for 4 years, the contracting officer for this case has 28 years of acquisition experience. Case E's mind map is at figure 15.

Nature of the Capability. This program is for the procurement of aircraft engine overhaul and repair services. The service includes scheduled maintenance, diagnostic efforts, and repair of inoperable equipment for three different types of engines. Two of the types of engine overhaul and repair services are available commercially. One of the types of engine overhaul and repair service is not available commercially, but the service was determined to be of a commercial type.

This capability was previously provided by an AF Air Logistic Center that was closed under the Base Realignment and Closure (BRAC) Act of 1995. This service was considered for outsourcing as the act provided for a public/ private competition. Therefore, the supplier selection and evaluation processes followed FAR part 12 for private offerors and resembled a FAR part 15 for the public offeror team.

The capability of maintaining and repairing weapon system and airlift systems engines was considered by the acquisition team to be near the AF core mission. The service in critical to supporting two near simultaneous regional conflicts.

Legal and Regulatory Environment. The service for Case E was determined to be of a commercial type. This determination in turn induced the use of FAR part 12 acquisition procedures for private offerors. Part 12 of the FAR requires agencies to use

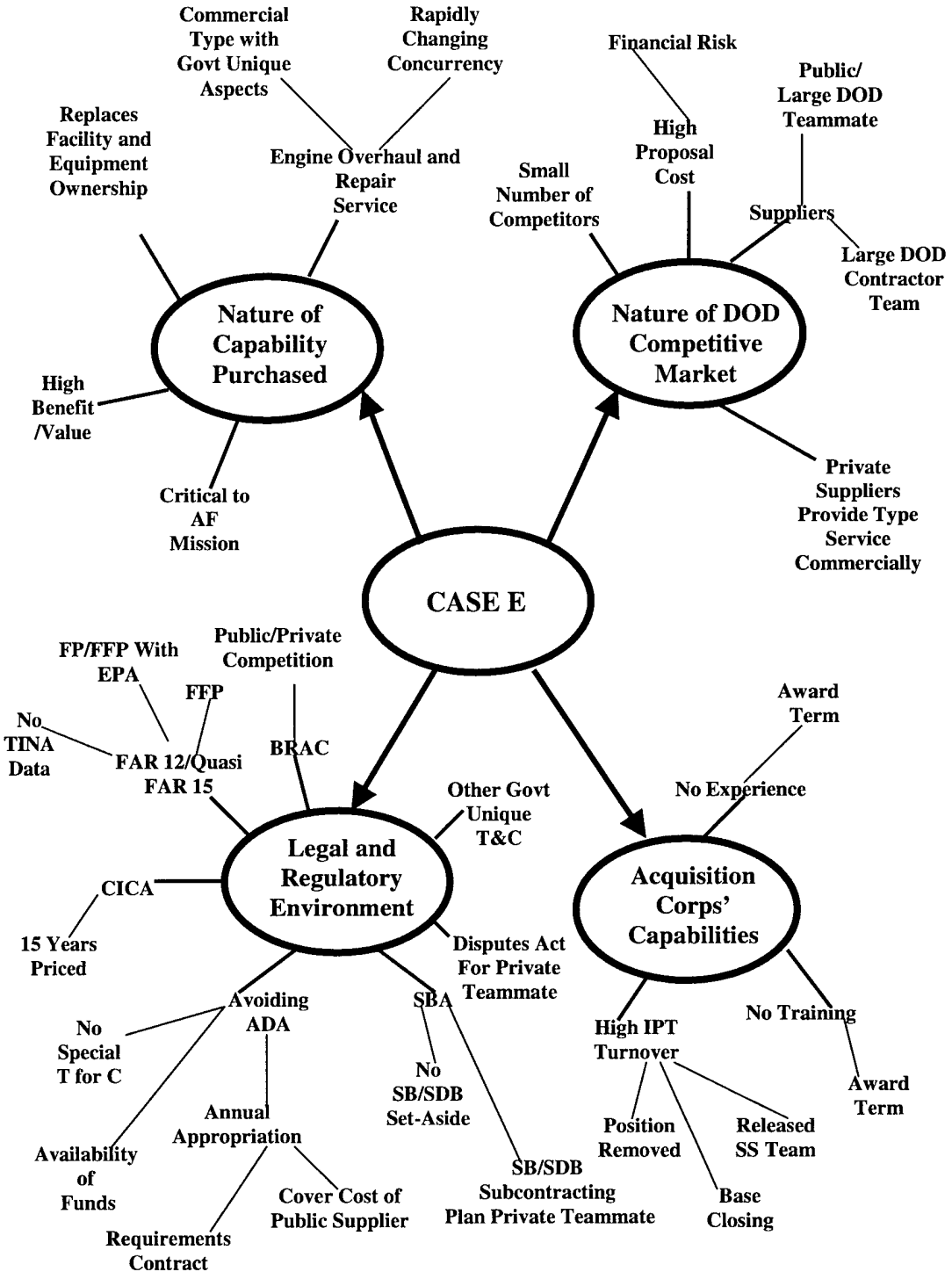

Figure 15: Case E Open Coded Mind Map

FFP contracts or fixed-price contracts with EPA for the acquisition of commercial items. However, the public offeror was required to submit cost and pricing data with no profit for the public offeror. In an attempt to maintain the spirit of commercial acquisition, a FP (no profit) with EPA type contract was awarded to the public offeror using an indefinite delivery requirements contractual vehicle. The public supplier of this effort issued a FFP with EPA type contract to their industry team member

The ADA does not apply to the public offeror, but does apply to the private team member. The use of annual 3400 appropriations makes it too risky for the government to award any cost type contract. Placement of annual orders using annual appropriation helps avoid ADA violations. The basis of consideration for contract formation is the government's promise to acquire these services only from the awarded supplier. The nature of a requirements contract imposes no obligation on the government to order a minimum amount of services. No special termination for convenience language was included excluding cost incurred to earn award terms. The contract contains an availability of funds clause. However, special provision was included to guarantee the supplier team five years of workload. If the contract team was terminated before the end of five years of orders, the government may incur a termination liability from the supplier's private teammate. As Case E's contract is funded with a 3400 annual appropriation, this could lead to an ADA violation.

To comply with CICA, the IPT for Case E synopsized and competed the service performance requirements for all 15 years. The ceiling amount of the contract includes the entire 15 years. The interviewee indicated that without firm pricing for the entire contract period of performance the same justification and approval needed to award a

sole source contract would have to be secured before granting the award term extension. The interviewee noted that if this were not a government procurement, offerors would not be required to provide prices now to establish the long-term relationship.

The SCA does not apply to repair and overhaul. The AFMC FAR supplement considers engine overhaul programs to be of the scope of a rebuilding or of a reconditioning effort that constitutes a re-manufacturing effort. Re-manufacturing efforts are not covered by the SCA.

As this was a competitive procurement that was conducted under FAR 12 no certified cost and pricing data or information other than cost and pricing data was required from any private offeror during source selection. TINA did not apply to the public offeror during source selection or after award. However, in Case E commercial market pricing data and historical cost data was available for this service. Because the supplier is public provider, requests for equitable adjustment are substantiate with information other than cost or pricing data.

Another regulation that affected this government acquisition included consideration of the small business requirements. Because the BRAC Act of 1995 directed this public/private competition, the SBA did not consider the effort for set-aside. Small business/small disadvantage business subcontracting plans were required to be submitted, evaluated, and administered.

The contract awarded contains several special clauses or government unique terms and conditions. The most notable special clause is an award term clause allowing extensions or reductions to the performance period not subject to the Disputes Act. The EPA clause allows downward only price adjustments. A workload volume guarantee

clause allows supplier to submit REA if the volume changes greater than plus or minus 25%. A clause notifies the supplier, at its own risk, it can induct and repa ir an item before the issuance of an order.

Nature of the DOD Competitive Market. This type of engine overhaul and repair service is commercially available. The number of license issued by the original equipment manufacturer limits the number of commercial suppliers. Only one public offeror was identified in the BRAC Act of 1995. Potentially numerous private suppliers could have competed for this service. All of the potential private suppliers were DOD contractors. Most suppliers develop teaming arrangements. According to the interviewee, some potential offerors dropped out of the competition due to the high cost of proposing or on the belief they would not be competitive. The winner was the public offeror with a major weapon systems manufacturer as a partner.

The interviewee contends no offeror had a technical competitive advantage over other offerors. However, one offeror a team included several original equipment manufacturers and another team included with licensed equipment maintenance members. Government furnished equipment and facilities were offered to all. All suppliers were provided access to hire experienced government employees.

The interviewee believes the long-term nature of the award term incentive concept reduces the potential for buy-in. Previously, suppliers have been able to get well from follow-on contracts. The FFP with downward only EPA contract type further reduced the potential for buy-in.

Acquisition Corps' Capabilities. The interviewee was the contracting officer for three years before award and one year after award for Case E. This participant has prior

experience buying services, using commercial procedures, and using ordering contracts. As the award term incentive concept is new, the participant did not have any experience using award term.

The core government IPT for Case E was very stable for the three years before award. Members of the IPT were denied special training opportunities and job rotations in order to maintain team cohesiveness for the largest contract using the new award term contract. Shortly following award of the contract, the IPT experienced 100% turnover of the team membership. This was due to permanent change of station assignments, long term school attendance, and job reassignments. The current IPT will soon see another dramatic turnover of personnel because the base is closing and some team members will not move to the new base that will be administering the program activities. The TDO for the award term has not changed. Another chairperson of the ATRB will be assigned when the program administration activities are moved to the new base.

The interviewee has not received or conducted formal training for the award term concept. Example documents have been provided to Navy and Army acquisition professional. Award term evaluation training was conducted with the IPT, the administrative contracting officer, and the customers.

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Vita

Mrs. Rachael A. Harris completed her Bachelor of Arts degree in Business Administration in Finance from Oklahoma Central University. She was employed by the Air Force in 1988 under the Copper Cap program. Following the four year training program at Air Force Systems Command, Aeronautical Systems Division, Wright Patterson AFB, Mrs. Harris was assigned to the Human System Center, Brooks AFB in 1992. She specialized in the procurement of aero-medical and chemical defense equipment and received a contracting officer warrant from the Human Systems Center in 1994.

In September 1995, Mrs. Harris was transferred to the Training System Product Group, Aeronautical Systems Center, Wright Patterson AFB. Having received a contracting officer warrant from ASC in 1997, she led an innovative source selection, awarding multiple ID/IQ contracts for cradle to grave pilot and aircrew training. During this same time, Mrs. Harris successfully completed Air Command and Staff College.

Mrs. Harris was admitted to the Graduate School of Engineering and Management, Air Force Institute of Technology as a part-time student in March 1999 and was admitted as a full-time student in August 1999. Upon completion of the AFIT Graduate Degree Program, she will be assigned to a contracting position at Aeronautical Systems Center. Currently, she is a 12-year member of the National Contract Management Association.

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Air Force Institute of Technology
Graduate School of Engineering and Management (AFIT/ENV)
2950 P Street, Building 640
WPAFB OH 45433-7765

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9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

HQ AFMC/PKPC
Maj Vincent Feck
4375 Chidlaw Road, Room S208
WPAFB OH 45433-5006
(937) 656-0449

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14. ABSTRACT

This research explored implementing a best commercial practice of establishing strategic purchasing relationships within the DOD procurement environment. The award term incentive provides for extensions or reductions to the term of the contract based on contractors' level of performance. Forthcoming implementation of Air Force FAR supplement 5317.7X Incentive Term Extension will likely increase the number of acquisitions using an award term incentive as a method of strategic source management.

Research findings indicate that management should consider expanding the AFMC award term guidance to include the model developed from this research, which identifies decision criteria for selecting the award term incentive strategic purchasing method. Findings indicate that the acquisition professionals may not have the expertise or related purchasing skills necessary to establish strategic purchasing relationships for commercial type performance based services and that training is needed. The researcher also uncovered evidence that instability and reductions in the DOD workforce affects acquisition professionals' ability to maintain currency with the changing legal environment. Further, workforce instability and reductions may influence the implementation of strategic contractual relationships. The research concludes that implementing the award term incentive affects the DOD competitive market.

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